FORM 3

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

AMENDED REPORT ☑

APPLICATION FOR PERMIT TO DRILL		1. WELL NAME and NUMBER: NBU 1022-14A4S
2. TYPE OF WORK: DRILL NEW WELL ◉ REENTER P&A WELL ○ DEEPEN WELL ○		3. FIELD OR WILDCAT: NATURAL BUTTES
4. TYPE OF WELL: Gas Well Coalbed Methane Well: NO		5. UNIT or COMMUNITIZATION AGREEMENT NAME: NATURAL BUTTES
6. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		7. OPERATOR PHONE: 720 929-6587
8. ADDRESS OF OPERATOR: P.O. Box 173779, Denver, CO, 80217		9. OPERATOR E-MAIL: mary.mondragon@anadarko.com
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE): ST UO 01197A	11. MINERAL OWNERSHIP: FEDERAL ○ INDIAN ○ STATE ◉ FEE ○	12. SURFACE OWNERSHIP: FEDERAL ○ INDIAN ○ STATE ◉ FEE ○
13. NAME OF SURFACE OWNER (if box 12 = 'fee')		14. SURFACE OWNER PHONE (if box 12 = 'fee')
15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')		16. SURFACE OWNER E-MAIL (if box 12 = 'fee')
17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')	18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS: YES ○ (Submit Commingling Application) NO ◉	19. SLANT: VERTICAL ○ DIRECTIONAL ◉ HORIZONTAL ○

20. LOCATION OF WELL	FOOTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN
LOCATION AT SURFACE	1230 FNL 1377 FEL	NWNE	14	10.0 S	22.0 E	S
Top of Uppermost Producing Zone	825 FNL 600 FEL	NENE	14	10.0 S	22.0 E	S
At Total Depth	825 FNL 600 FEL	NENE	14	10.0 S	22.0 E	S

21. COUNTY	22. DISTANCE TO NEAREST LEASE LINE (Feet)	23. NUMBER OF ACRES IN DRILLING UNIT
UINTAH	600	1674
	25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed): 20	26. PROPOSED DEPTH: MD: 8576 TVD: 8400
27. ELEVATION - GROUND LEVEL: 5235	28. BOND NUMBER: 22013542	29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE: Permit #43-8496

ATTACHMENTS

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORCANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES

☑ WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER	☑ COMPLETE DRILLING PLAN
☐ AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)	☐ FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER
☑ DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)	☑ TOPOGRAPHICAL MAP

NAME: Kevin McIntyre	TITLE: Regulatory Analyst I	PHONE: 720 929-6226
SIGNATURE	DATE: 03/17/2009	EMAIL: Kevin.McIntyre@anadarko.com

API NUMBER ASSIGNED
43047502270000

APPROVAL

Permit Manager

Proposed Hole, Casing, and Cement						
String	**Hole Size**	**Casing Size**	**Top (MD)**	**Bottom (MD)**		
Surf	12.25	9.625	0	1900		
Pipe	**Grade**	**Length**	**Weight**			
	Grade J-55 LT&C	1900	36.0			

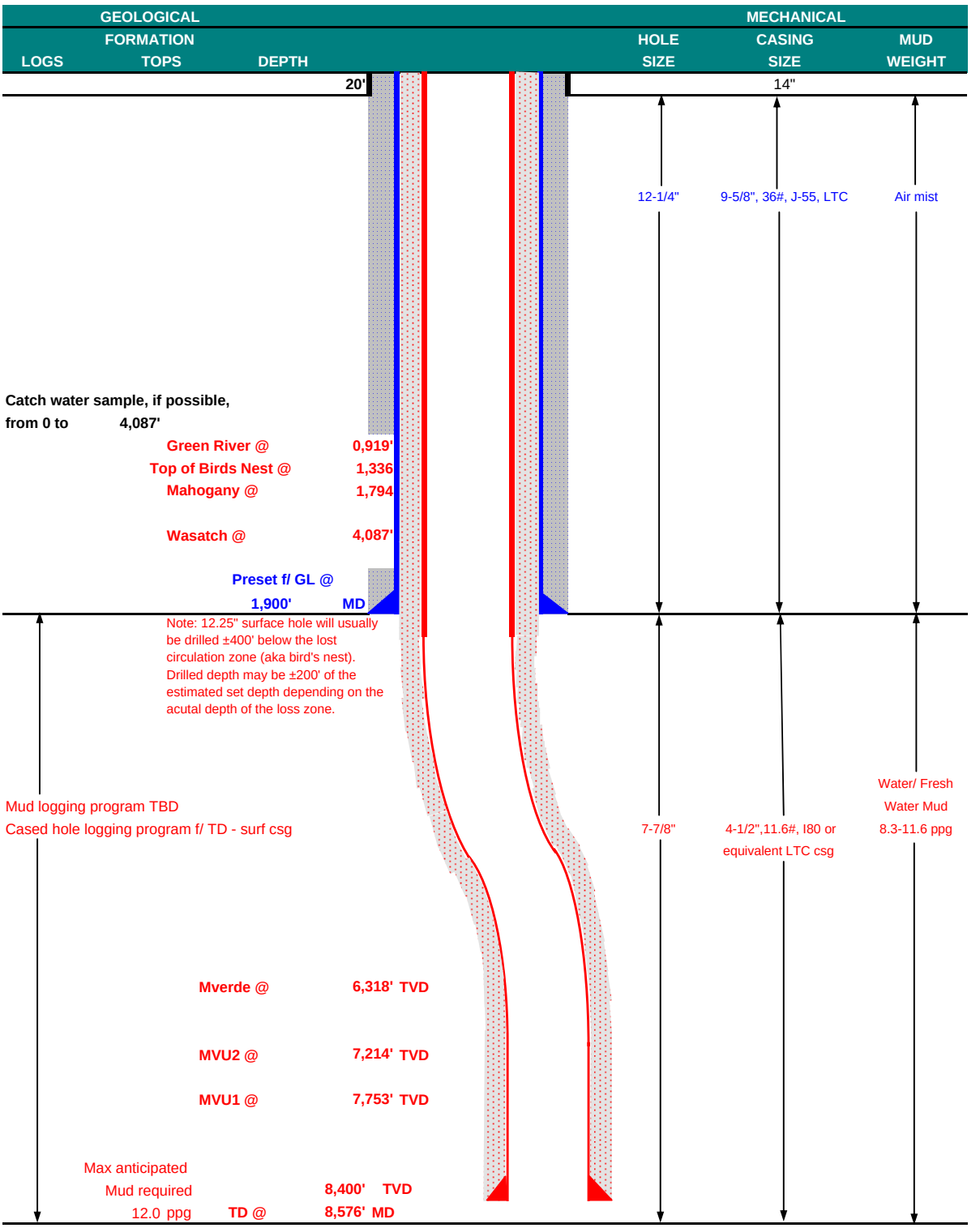
Proposed Hole, Casing, and Cement						
String	**Hole Size**	**Casing Size**	**Top (MD)**	**Bottom (MD)**		
Prod	7.875	4.5	0	8576		
Pipe	**Grade**	**Length**	**Weight**			
	Grade I-80 LT&C	8576	11.6			

'APIWellNo:43047502270000'

KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP		DATE	January 19, 2009	
WELL NAME	**NBU 1022-14A4S**		TD	8,400' TVD	8,576' MD
FIELD	Natural Buttes	COUNTY Uintah	STATE Utah	ELEVATION	5,235' GL KB 5,250'
SURFACE LOCATION	NWNE1230' FNL & 1377' FEL, Sec. 14, T 10S R 22E				
	Latitude: 39.952872	Longitude: -109.401908		NAD 27	
BTM HOLE LOCATION	NENE 825' FNL & 600' FEL, Sec. 14, T 10S R 22E				
	Latitude: 39.953986	Longitude: -109.399186		NAD 27	
OBJECTIVE ZONE(S)	Wasatch/Mesaverde				
ADDITIONAL INFO	Regulatory Agencies: UDOGM (Minerals & Surface), BLM, Tri-County Health Dept.				



'APIWellNo:43047502270000'

KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL			WT.	GR.	CPLG.	DESIGN FACTORS BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'								
								3520	2020	453000
SURFACE	9-5/8"	0	to	1900	36.00	J-55	LTC	1.02	2.27	8.43
								7780	6350	201000
PRODUCTION	4-1/2"	0	to	8576	11.60	I-80	LTC	2.25	1.19	2.32

1) Max Anticipated Surf. Press.(MASP) (Surface Casing) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point)

2) MASP (Prod Casing) = Pore Pressure at TD - (.22 psi/ft-partial evac gradient x TD)

(Burst Assumptions: TD = 12.0 ppg) .22 psi/ft = gradient for partially evac wellbore

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

MASP 3430 psi

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500	Premium cmt + 2% CaCl	215	60%	15.60	1.18
Option 1			+ .25 pps flocele				
	TOP OUT CMT (1)	200	20 gals sodium silicate + Premium cmt	50		15.60	1.18
			+ 2% CaCl + .25 pps flocele				
	TOP OUT CMT (2)	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
SURFACE			**NOTE: If well will circulate water to surface, option 2 will be utilized**				
Option 2	LEAD	1500	65/35 Poz + 6% Gel + 10 pps gilsonite	360	35%	12.60	1.81
			+.25 pps Flocele + 3% salt BWOW				
	TAIL	500	Premium cmt + 2% CaCl	180	35%	15.60	1.18
			+ .25 pps flocele				
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
PRODUCTION	LEAD	3,586'	Premium Lite II + 3% KCl + 0.25 pps	350	40%	11.00	3.38
			celloflake + 5 pps gilsonite + 10% gel				
			+ 0.5% extender				
	TAIL	4,990'	50/50 Poz/G + 10% salt + 2% gel	1220	40%	14.30	1.31
			+.1% R-3				

*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe.
PRODUCTION	Float shoe, 1 jt, float collar. Centralize first 3 joints & every third joint to top of tail cement with bow spring centralizers.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. Test to 5,000 psi (annular to 2,500 psi) prior to drilling out. Record on chart recorder & tour sheet. Function test rams on each trip. Maintain safety valve & inside BOP on rig floor at all times. Kelly to be equipped with upper & lower kelly valves.

Drop Totco surveys every 2000'. Maximum allowable hole angle is 5 degrees.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER: _____ **DATE:** _____

Brad Laney

DRILLING SUPERINTENDENT: _____ **DATE:** _____

Randy Bayne

NBU 1022-14A4S
NWNE Sec. 14 T10S R22E
UINTAH COUNTY, UTAH
ST UO 01197A

ONSHORE ORDER NO. 1

DRILLING PROGRAM

1. Estimated Tops of Important Geologic Markers:

Formation	Depth
Uinta	0- Surface
Green River	919’
Birds Nest	1336’
Mahogany	1794’
Wasatch	4087’
Mesaverde	6318’
MVU2	7214’
MVL1	7753’
TVD	8400’
TD	8576’

2. Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

Substance	Formation	Depth
	Green River	919’
Water	Birds Nest	1336’
Water	Mahogany	1794’
Gas	Wasatch	4087’
Gas	Mesaverde	6318’
Gas	MVU2	7214’
Gas	MVL1	7753’
Water	N/A	
Other Minerals	N/A	

3. Pressure Control Equipment (Schematic Attached)

Please refer to the attached Drilling Program.

4. Proposed Casing & Cementing Program:

Please refer to the attached Drilling Program.

5. Drilling Fluids Program:

Please refer to the attached Drilling Program.

6. Evaluation Program:

Please refer to the attached Drilling Program.

7. Abnormal Conditions:

Maximum anticipated bottomhole pressure calculated at 8576' TD, approximately equals 5317psi (calculated at 0.62 psi/foot).

Maximum anticipated surface pressure equals approximately 3430 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

8. Anticipated Starting Dates:

Drilling is planned to commence immediately upon approval of this application.

9. Variances:

Please refer to the attached Drilling Program.
Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- *Blowout Prevention Equipment (BOPE) requirements;*
- *Mud program requirements; and*
- *Special drilling operation (surface equipment placement) requirements associated with air drilling.*

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

Background

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found

competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12-1/4 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 12-1/4 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 9-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

Variance for BOPE Requirements
The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

Variance for Mud Material Requirements
Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

Variance for Special Drilling Operation (surface equipment placement) Requirements
Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

Conclusion
The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

10. Other Information:

Please refer to the attached Drilling Program.

Scientific Drilling
Rocky Mountain Operations

Project: Uintah County, UT
Site: NBU 1022-14B Pad
Well: NBU 1022-14A4S
Wellbore: OH
Design: Plan #1

Kerr McGee Oil and Gas Onshore LP

T M

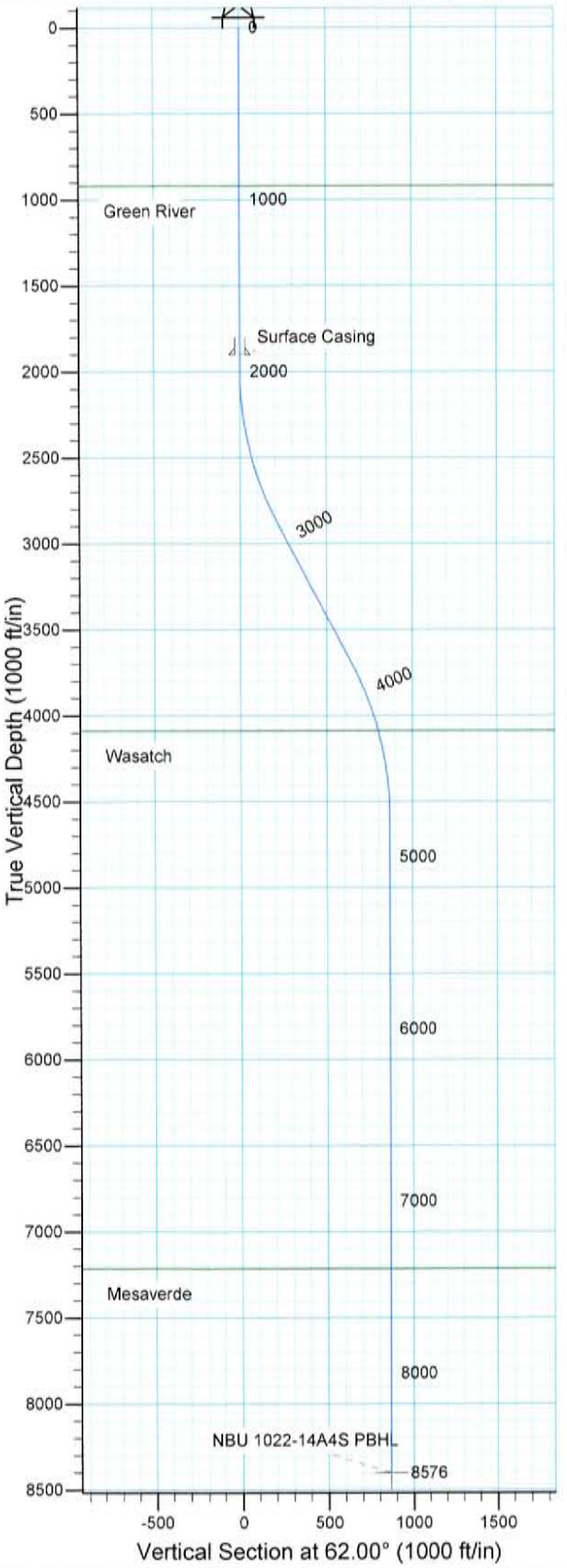
Azimuths to True North
Magnetic North: 11.35°

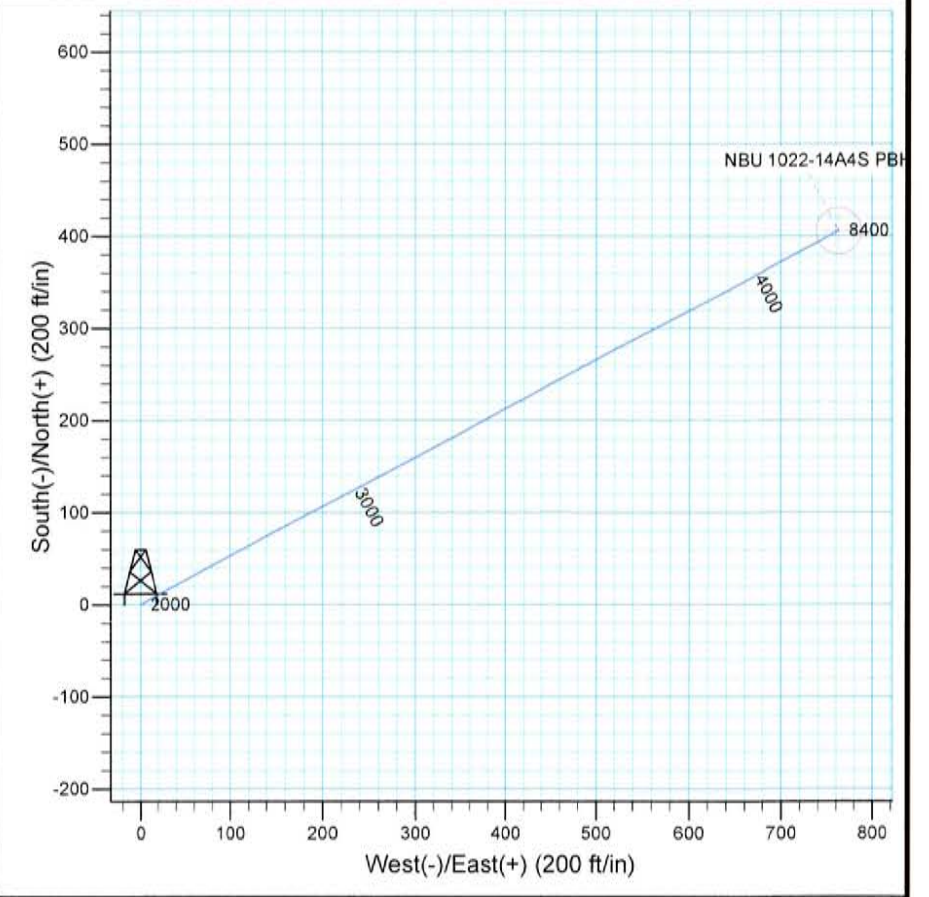
Magnetic Field
Strength: 52603.3snT
Dip Angle: 65.92°
Date: 10/21/2008
Model: IGRF2005-10

WELL DETAILS: NBU 1022-14A4S

GL 5234' & RKB 18' @ 5252.00ft 5234.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	596778.57	2588119.98	39° 57' 10.340 N	109° 24' 6.870 W





Plan: Plan #1 (NBU 1022-14A4S/OH)

Created By: Julie Cruse Date: 2008-10-21

PROJECT DETAILS: Uintah County, UT

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Utah Central 4302
Location: Sec 14 T10S R22E
System Datum: Mean Sea Level
Local North: True

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	0.00	
2924.26	27.73	62.00	2888.61	102.96	193.65	3.00	62.00	219.31	
3839.11	27.73	62.00	3698.39	302.78	569.48	0.00	0.00	644.97	
4763.37	0.00	0.00	4587.00	405.74	763.12	3.00	180.00	864.28	
8576.37	0.00	0.00	8400.00	405.74	763.12	0.00	0.00	864.28	NBU 1022-14A4S PBHL

'API Well No: 43047502270000'

Scientific Drilling
Rocky Mountain Operations

Kerr McGee Oil and Gas Onshore LP

Uintah County, UT
NBU 1022-14B Pad
NBU 1022-14A4S
OH

Plan: Plan #1

Standard Planning Report

21 October, 2008

Database:	EDM 2003.16 Multi User DB	**Local Co-ordinate Reference:**	Well NBU 1022-14A4S
Company:	Kerr McGee Oil and Gas Onshore LP	**TVD Reference:**	GL 5234' & RKB 18' @ 5252.00ft
Project:	Uintah County, UT	**MD Reference:**	GL 5234' & RKB 18' @ 5252.00ft
Site:	NBU 1022-14B Pad	**North Reference:**	True
Well:	NBU 1022-14A4S	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Project	Uintah County, UT		
Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Utah Central 4302		

Site	NBU 1022-14B Pad, Sec 14 T10S R22E				
Site Position:		**Northing:**	596,779.66 ft	**Latitude:**	39° 57' 10.360 N
From:	Lat/Long	**Easting:**	2,588,080.23 ft	**Longitude:**	109° 24' 7.380 W
Position Uncertainty:	0.00 ft	**Slot Radius:**	in	**Grid Convergence:**	1.34 °

Well	NBU 1022-14A4S, 1230' FNL 1377' FEL					
Well Position	**+N/-S**	0.00 ft	**Northing:**	596,778.57 ft	**Latitude:**	39° 57' 10.340 N
	+E/-W	0.00 ft	**Easting:**	2,588,119.98 ft	**Longitude:**	109° 24' 6.870 W
Position Uncertainty		0.00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	5,234.00 ft

Wellbore	OH				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2005-10	10/21/2008	11.35	65.92	52,603

Design	Plan #1				
Audit Notes:					
Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00
Vertical Section:	**Depth From (TVD) (ft)**	**+N/-S (ft)**	**+E/-W (ft)**	**Direction (°)**	
	0.00	0.00	0.00	62.00	

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,924.26	27.73	62.00	2,888.61	102.96	193.65	3.00	3.00	0.00	62.00	
3,839.11	27.73	62.00	3,698.39	302.78	569.48	0.00	0.00	0.00	0.00	
4,763.37	0.00	0.00	4,587.00	405.74	763.12	3.00	-3.00	0.00	180.00	
8,576.37	0.00	0.00	8,400.00	405.74	763.12	0.00	0.00	0.00	0.00	NBU 1022-14A4S PB

Database:	EDM 2003.16 Multi User DB	**Local Co-ordinate Reference:**	Well NBU 1022-14A4S
Company:	Kerr McGee Oil and Gas Onshore LP	**TVD Reference:**	GL 5234' & RKB 18' @ 5252.00ft
Project:	Uintah County, UT	**MD Reference:**	GL 5234' & RKB 18' @ 5252.00ft
Site:	NBU 1022-14B Pad	**North Reference:**	True
Well:	NBU 1022-14A4S	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
919.00	0.00	0.00	919.00	0.00	0.00	0.00	0.00	0.00	0.00
Green River									
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
Surface Casing									
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	3.00	62.00	2,099.95	1.23	2.31	2.62	3.00	3.00	0.00
2,200.00	6.00	62.00	2,199.63	4.91	9.24	10.46	3.00	3.00	0.00
2,300.00	9.00	62.00	2,298.77	11.04	20.76	23.51	3.00	3.00	0.00
2,400.00	12.00	62.00	2,397.08	19.59	36.85	41.74	3.00	3.00	0.00
2,500.00	15.00	62.00	2,494.31	30.55	57.46	65.08	3.00	3.00	0.00
2,600.00	18.00	62.00	2,590.18	43.88	82.53	93.48	3.00	3.00	0.00
2,700.00	21.00	62.00	2,684.43	59.55	112.01	126.85	3.00	3.00	0.00
2,800.00	24.00	62.00	2,776.81	77.51	145.79	165.12	3.00	3.00	0.00
2,900.00	27.00	62.00	2,867.06	97.72	183.80	208.16	3.00	3.00	0.00
2,924.26	27.73	62.00	2,888.61	102.96	193.65	219.31	3.00	3.00	0.00
3,000.00	27.73	62.00	2,955.65	119.50	224.76	254.55	0.00	0.00	0.00
3,100.00	27.73	62.00	3,044.16	141.34	265.84	301.08	0.00	0.00	0.00
3,200.00	27.73	62.00	3,132.68	163.18	306.92	347.61	0.00	0.00	0.00
3,300.00	27.73	62.00	3,221.20	185.03	348.00	394.13	0.00	0.00	0.00
3,400.00	27.73	62.00	3,309.71	206.87	389.09	440.66	0.00	0.00	0.00
3,500.00	27.73	62.00	3,398.23	228.71	430.17	487.19	0.00	0.00	0.00
3,600.00	27.73	62.00	3,486.75	250.55	471.25	533.72	0.00	0.00	0.00
3,700.00	27.73	62.00	3,575.26	272.40	512.33	580.24	0.00	0.00	0.00
3,800.00	27.73	62.00	3,663.78	294.24	553.41	626.77	0.00	0.00	0.00
3,839.11	27.73	62.00	3,698.39	302.78	569.48	644.97	0.00	0.00	0.00
3,900.00	25.90	62.00	3,752.74	315.67	593.73	672.43	3.00	-3.00	0.00
4,000.00	22.90	62.00	3,843.80	335.07	630.20	713.74	3.00	-3.00	0.00
4,100.00	19.90	62.00	3,936.89	352.19	662.42	750.23	3.00	-3.00	0.00
4,200.00	16.90	62.00	4,031.77	367.01	690.29	781.79	3.00	-3.00	0.00
4,257.47	15.18	62.00	4,087.00	374.47	704.31	797.67	3.00	-3.00	0.00
Wasatch									
4,300.00	13.90	62.00	4,128.16	379.48	713.73	808.34	3.00	-3.00	0.00
4,400.00	10.90	62.00	4,225.82	389.56	732.69	829.82	3.00	-3.00	0.00
4,500.00	7.90	62.00	4,324.47	397.22	747.12	846.15	3.00	-3.00	0.00

Database:	EDM 2003.16 Multi User DB	**Local Co-ordinate Reference:**	Well NBU 1022-14A4S
Company:	Kerr McGee Oil and Gas Onshore LP	**TVD Reference:**	GL 5234' & RKB 18' @ 5252.00ft
Project:	Uintah County, UT	**MD Reference:**	GL 5234' & RKB 18' @ 5252.00ft
Site:	NBU 1022-14B Pad	**North Reference:**	True
Well:	NBU 1022-14A4S	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,600.00	4.90	62.00	4,423.83	402.46	756.96	857.30	3.00	-3.00	0.00
4,700.00	1.90	62.00	4,523.64	405.24	762.20	863.23	3.00	-3.00	0.00
4,763.37	0.00	0.00	4,587.00	405.74	763.12	864.28	3.00	-3.00	0.00
4,800.00	0.00	0.00	4,623.63	405.74	763.12	864.28	0.00	0.00	0.00
4,900.00	0.00	0.00	4,723.63	405.74	763.12	864.28	0.00	0.00	0.00
5,000.00	0.00	0.00	4,823.63	405.74	763.12	864.28	0.00	0.00	0.00
5,100.00	0.00	0.00	4,923.63	405.74	763.12	864.28	0.00	0.00	0.00
5,200.00	0.00	0.00	5,023.63	405.74	763.12	864.28	0.00	0.00	0.00
5,300.00	0.00	0.00	5,123.63	405.74	763.12	864.28	0.00	0.00	0.00
5,400.00	0.00	0.00	5,223.63	405.74	763.12	864.28	0.00	0.00	0.00
5,500.00	0.00	0.00	5,323.63	405.74	763.12	864.28	0.00	0.00	0.00
5,600.00	0.00	0.00	5,423.63	405.74	763.12	864.28	0.00	0.00	0.00
5,700.00	0.00	0.00	5,523.63	405.74	763.12	864.28	0.00	0.00	0.00
5,800.00	0.00	0.00	5,623.63	405.74	763.12	864.28	0.00	0.00	0.00
5,900.00	0.00	0.00	5,723.63	405.74	763.12	864.28	0.00	0.00	0.00
6,000.00	0.00	0.00	5,823.63	405.74	763.12	864.28	0.00	0.00	0.00
6,100.00	0.00	0.00	5,923.63	405.74	763.12	864.28	0.00	0.00	0.00
6,200.00	0.00	0.00	6,023.63	405.74	763.12	864.28	0.00	0.00	0.00
6,300.00	0.00	0.00	6,123.63	405.74	763.12	864.28	0.00	0.00	0.00
6,400.00	0.00	0.00	6,223.63	405.74	763.12	864.28	0.00	0.00	0.00
6,500.00	0.00	0.00	6,323.63	405.74	763.12	864.28	0.00	0.00	0.00
6,600.00	0.00	0.00	6,423.63	405.74	763.12	864.28	0.00	0.00	0.00
6,700.00	0.00	0.00	6,523.63	405.74	763.12	864.28	0.00	0.00	0.00
6,800.00	0.00	0.00	6,623.63	405.74	763.12	864.28	0.00	0.00	0.00
6,900.00	0.00	0.00	6,723.63	405.74	763.12	864.28	0.00	0.00	0.00
7,000.00	0.00	0.00	6,823.63	405.74	763.12	864.28	0.00	0.00	0.00
7,100.00	0.00	0.00	6,923.63	405.74	763.12	864.28	0.00	0.00	0.00
7,200.00	0.00	0.00	7,023.63	405.74	763.12	864.28	0.00	0.00	0.00
7,300.00	0.00	0.00	7,123.63	405.74	763.12	864.28	0.00	0.00	0.00
7,390.37	0.00	0.00	7,214.00	405.74	763.12	864.28	0.00	0.00	0.00
Mesaverde									
7,400.00	0.00	0.00	7,223.63	405.74	763.12	864.28	0.00	0.00	0.00
7,500.00	0.00	0.00	7,323.63	405.74	763.12	864.28	0.00	0.00	0.00
7,600.00	0.00	0.00	7,423.63	405.74	763.12	864.28	0.00	0.00	0.00
7,700.00	0.00	0.00	7,523.63	405.74	763.12	864.28	0.00	0.00	0.00
7,800.00	0.00	0.00	7,623.63	405.74	763.12	864.28	0.00	0.00	0.00
7,900.00	0.00	0.00	7,723.63	405.74	763.12	864.28	0.00	0.00	0.00
8,000.00	0.00	0.00	7,823.63	405.74	763.12	864.28	0.00	0.00	0.00
8,100.00	0.00	0.00	7,923.63	405.74	763.12	864.28	0.00	0.00	0.00
8,200.00	0.00	0.00	8,023.63	405.74	763.12	864.28	0.00	0.00	0.00
8,300.00	0.00	0.00	8,123.63	405.74	763.12	864.28	0.00	0.00	0.00
8,400.00	0.00	0.00	8,223.63	405.74	763.12	864.28	0.00	0.00	0.00
8,500.00	0.00	0.00	8,323.63	405.74	763.12	864.28	0.00	0.00	0.00
8,576.37	0.00	0.00	8,400.00	405.74	763.12	864.28	0.00	0.00	0.00

Database:	EDM 2003.16 Multi User DB	**Local Co-ordinate Reference:**	Well NBU 1022-14A4S
Company:	Kerr McGee Oil and Gas Onshore LP	**TVD Reference:**	GL 5234' & RKB 18' @ 5252.00ft
Project:	Uintah County, UT	**MD Reference:**	GL 5234' & RKB 18' @ 5252.00ft
Site:	NBU 1022-14B Pad	**North Reference:**	True
Well:	NBU 1022-14A4S	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
NBU 1022-14A4S PBHL - plan hits target center - Circle (radius 25.00)	0.00	0.00	8,400.00	405.74	763.12	597,202.09	2,588,873.38	39° 57' 14.350 N	109° 23' 57.070 W

Casing Points

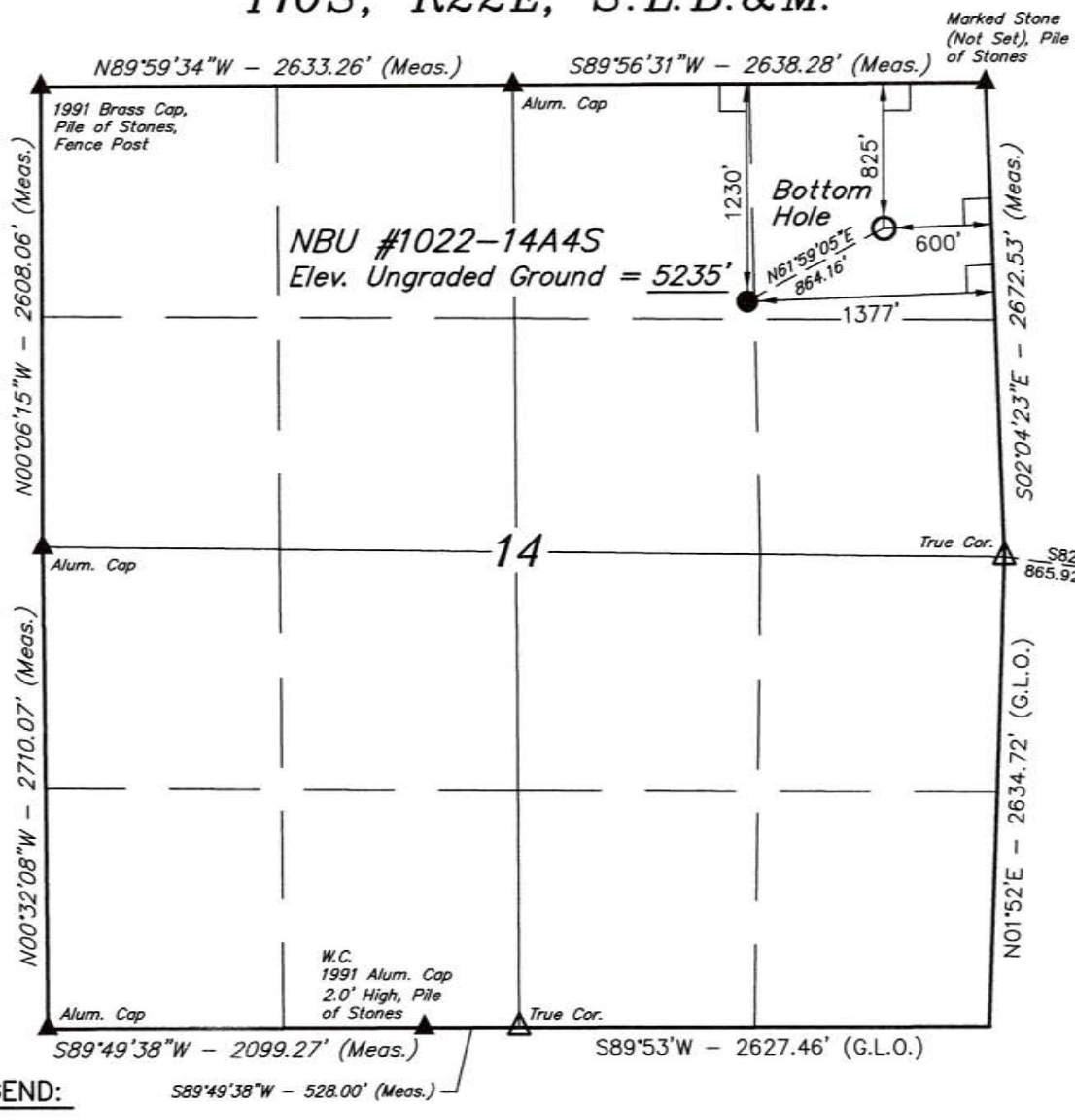
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
1,900.00	1,900.00	Surface Casing	9.625	13.500

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
919.00	919.00	Green River		0.00	
4,257.47	4,087.00	Wasatch		0.00	
7,390.37	7,214.00	Mesaverde		0.00	

'APIWellNo:43047502270000'

T10S, R22E, S.L.B.&M.



Kerr–McGee Oil & Gas Onshore LP

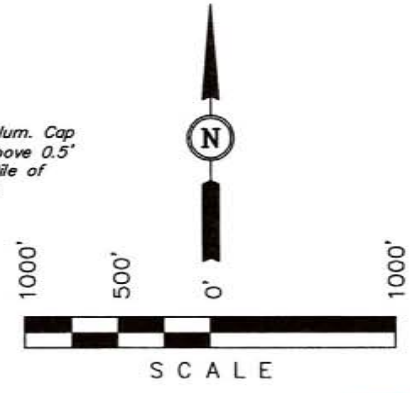
Well location, NBU #1022–14A4S, located as shown in the NW 1/4 NE 1/4 of Section 14, T10S, R22E, S.L.B.&M., Uintah County, Utah.

BASIS OF ELEVATION

TWO WATER TRIANGULATION STATION LOCATED IN THE NW 1/4 OF SECTION 1, T10S, R21E, S.L.B.&M., TAKEN FROM THE BIG PACK MTN NE, QUADRANGLE, UTAH, UINTAH COUNTY, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 5238 FEET.

BASIS OF BEARINGS

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.



CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR
REGISTRATION NO. 161319
STATE OF UTAH

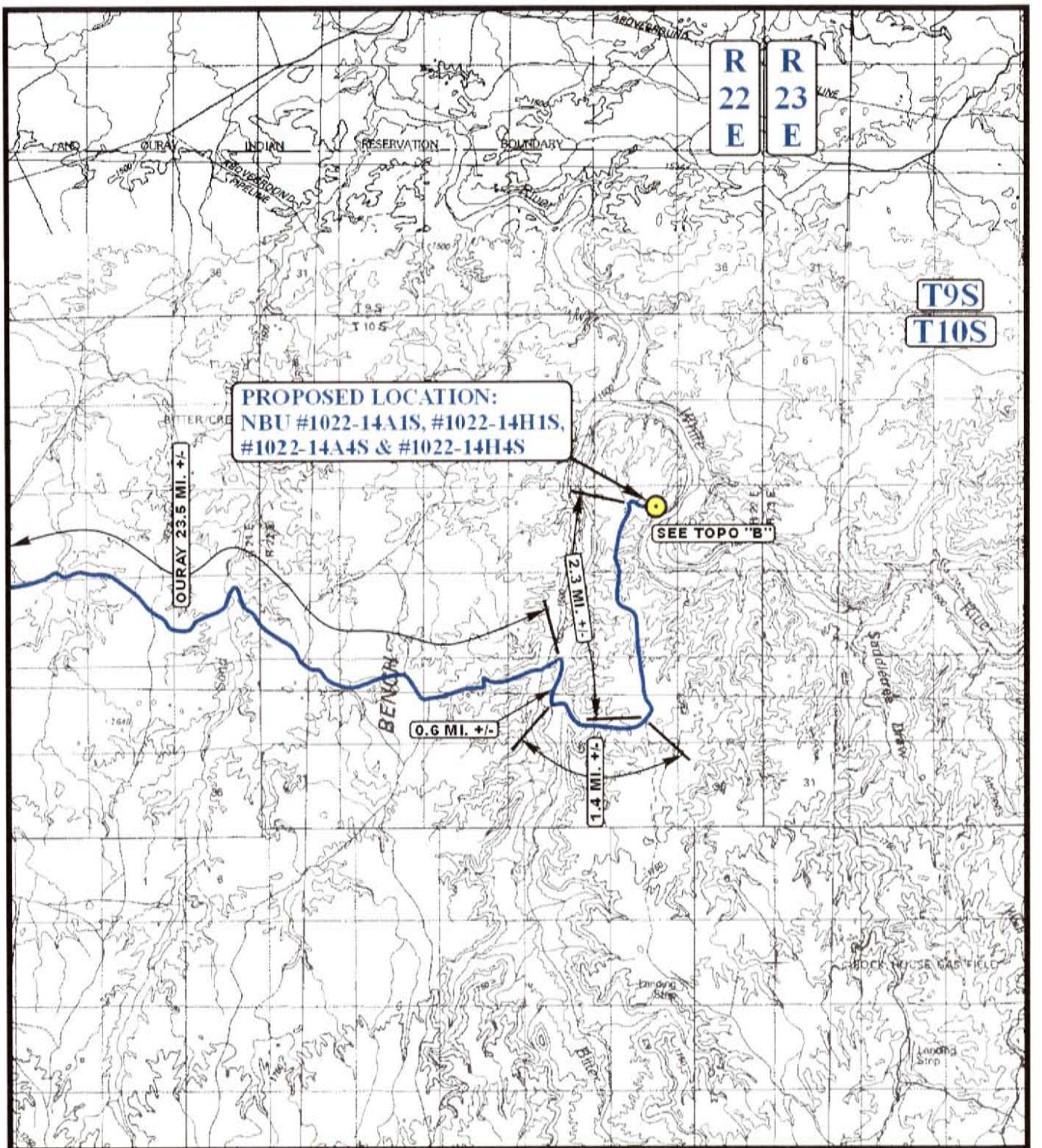
LEGEND:

- ⌟ = 90° SYMBOL
- ● = PROPOSED WELL HEAD.
- ▲ = SECTION CORNERS LOCATED.
- △ = SECTION CORNERS RE-ESTABLISHED. (Not Set on Ground)

NAD 83 (TARGET BOTTOM HOLE)	NAD 83 (SURFACE LOCATION)
LATITUDE = 39°57'14.23" (39.953953)	LATITUDE = 39°57'10.22" (39.952839)
LONGITUDE = 109°23'59.52" (109.399867)	LONGITUDE = 109°24'09.32" (109.402589)
NAD 27 (TARGET BOTTOM HOLE)	**NAD 27 (SURFACE LOCATION)**
LATITUDE = 39°57'14.35" (39.953986)	LATITUDE = 39°57'10.34" (39.952872)
LONGITUDE = 109°23'57.07" (109.399186)	LONGITUDE = 109°24'06.87" (109.401908)

UINTAH ENGINEERING & LAND SURVEYING
85 SOUTH 200 EAST – VERNAL, UTAH 84078
(435) 789–1017

SCALE: 1" = 1000'	DATE SURVEYED: 08–13–08	DATE DRAWN: 08–15–08
PARTY: D.K. C.K. C.C.	REFERENCES: G.L.O. PLAT	
WEATHER: HOT	FILE: Kerr–McGee Oil & Gas Onshore LP	



LEGEND:

PROPOSED LOCATION

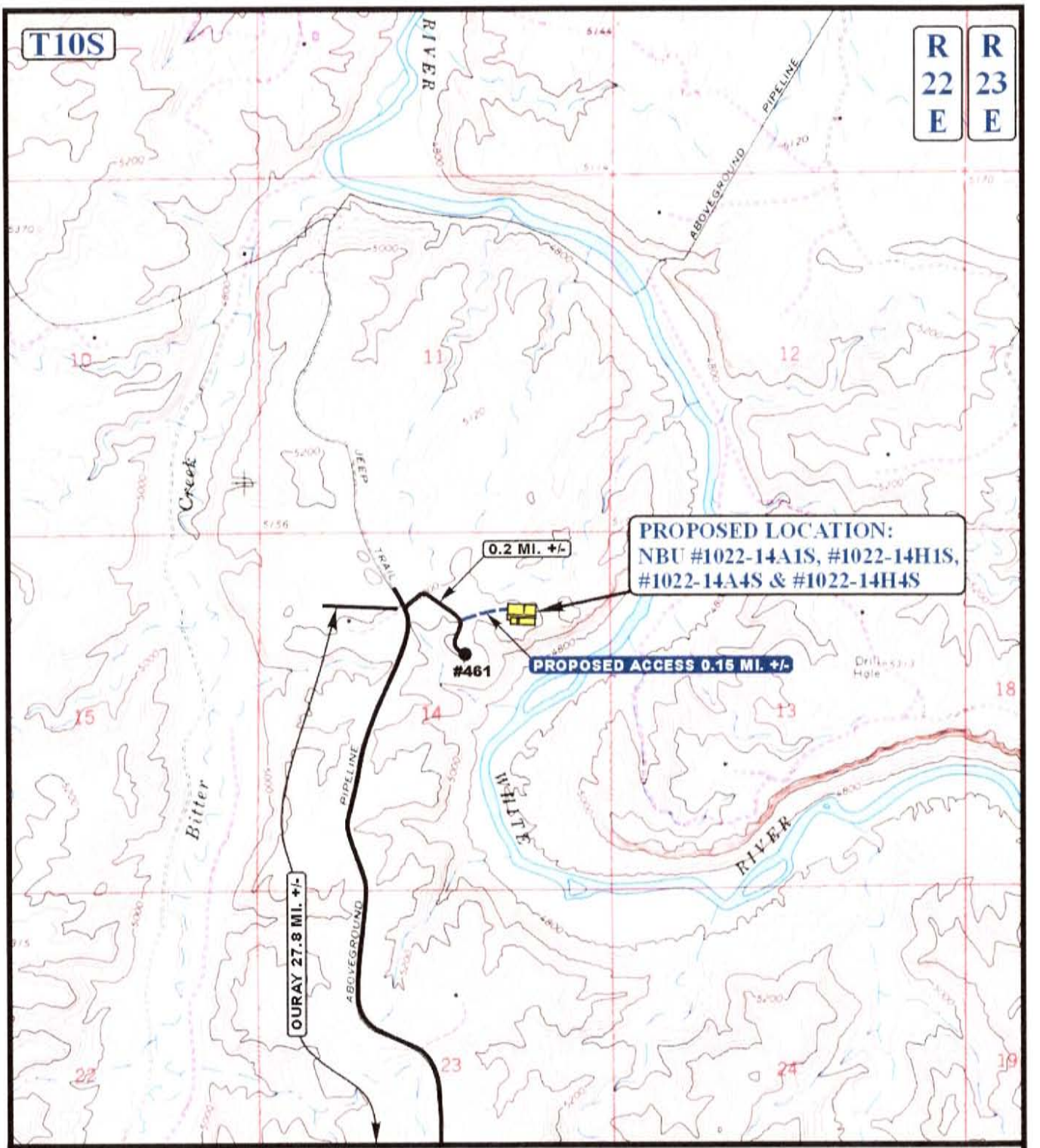
N

Kerr-McGee Oil & Gas Onshore LP

NBU #1022-14A1S, #1022-14H1S, #1022-14A4S & #1022-14H4S
SECTION 14, T10S, R22E, S.L.B.&M.
NW 1/4 NE 1/4

Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

TOPOGRAPHIC MAP	02 MONTH	23 DAY	07 YEAR	A TOPO
SCALE: 1:100,000	DRAWN BY: C.P.	REV: 08-21-08 J.J.		



LEGEND:

EXISTING ROAD

PROPOSED ACCESS ROAD

N

Kerr-McGee Oil & Gas Onshore LP

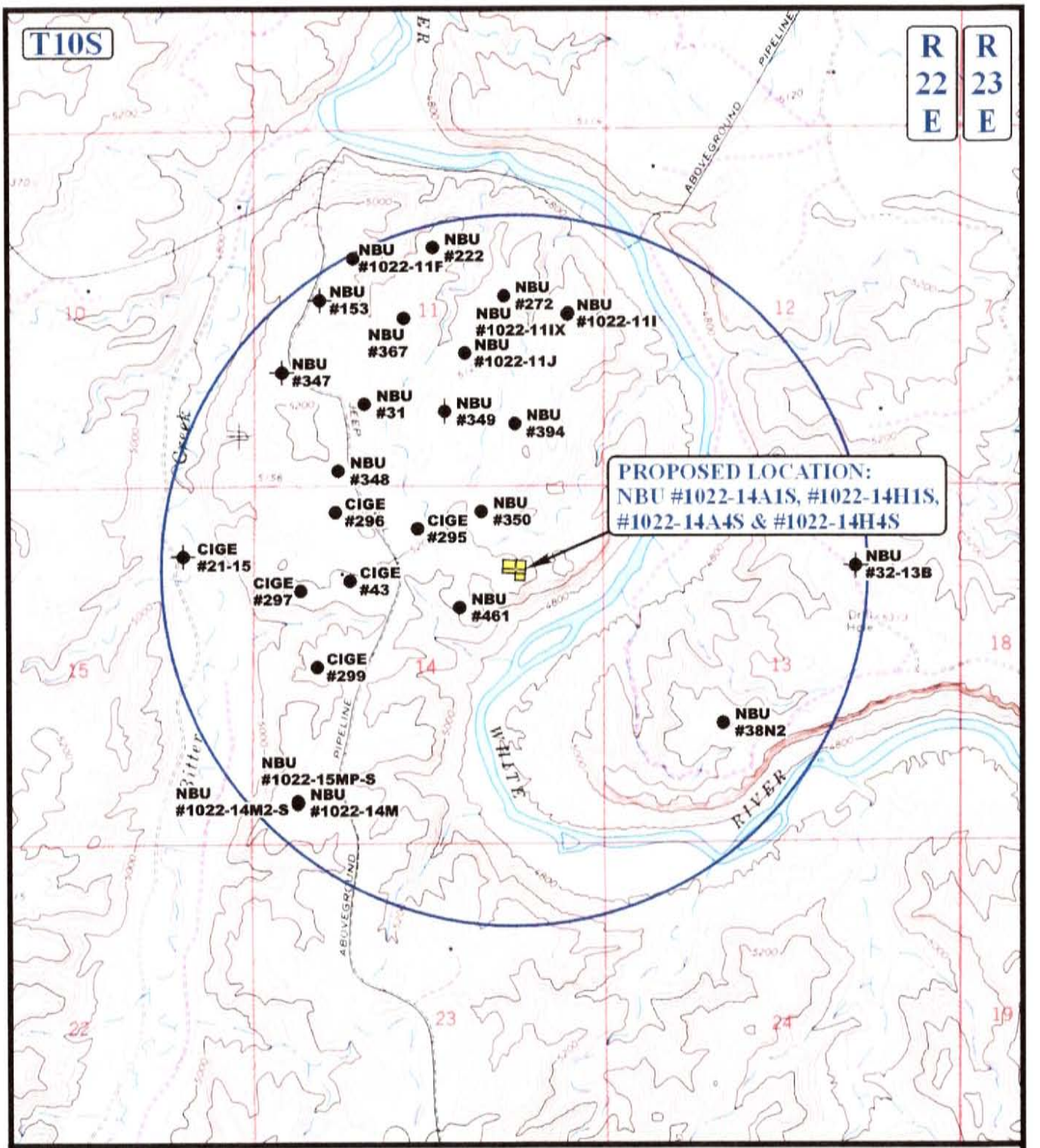
NBU #1022-14A1S, #1022-14H1S, #1022-14A4S & #1022-14H4S
SECTION 14, T10S, R22E, S.L.B.&M.
NW 1/4 NE 1/4

Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

TOPOGRAPHIC MAP | 02 MONTH | 23 DAY | 07 YEAR | B TOPO

SCALE: 1" = 2000' | DRAWN BY: C.P. | REV: 08-21-08 J.J.

'APIWellNo:43047502270000'



LEGEND:

- DISPOSAL WELLS
- PRODUCING WELLS
- SHUT IN WELLS
- WATER WELLS
- ABANDONED WELLS
- TEMPORARILY ABANDONED

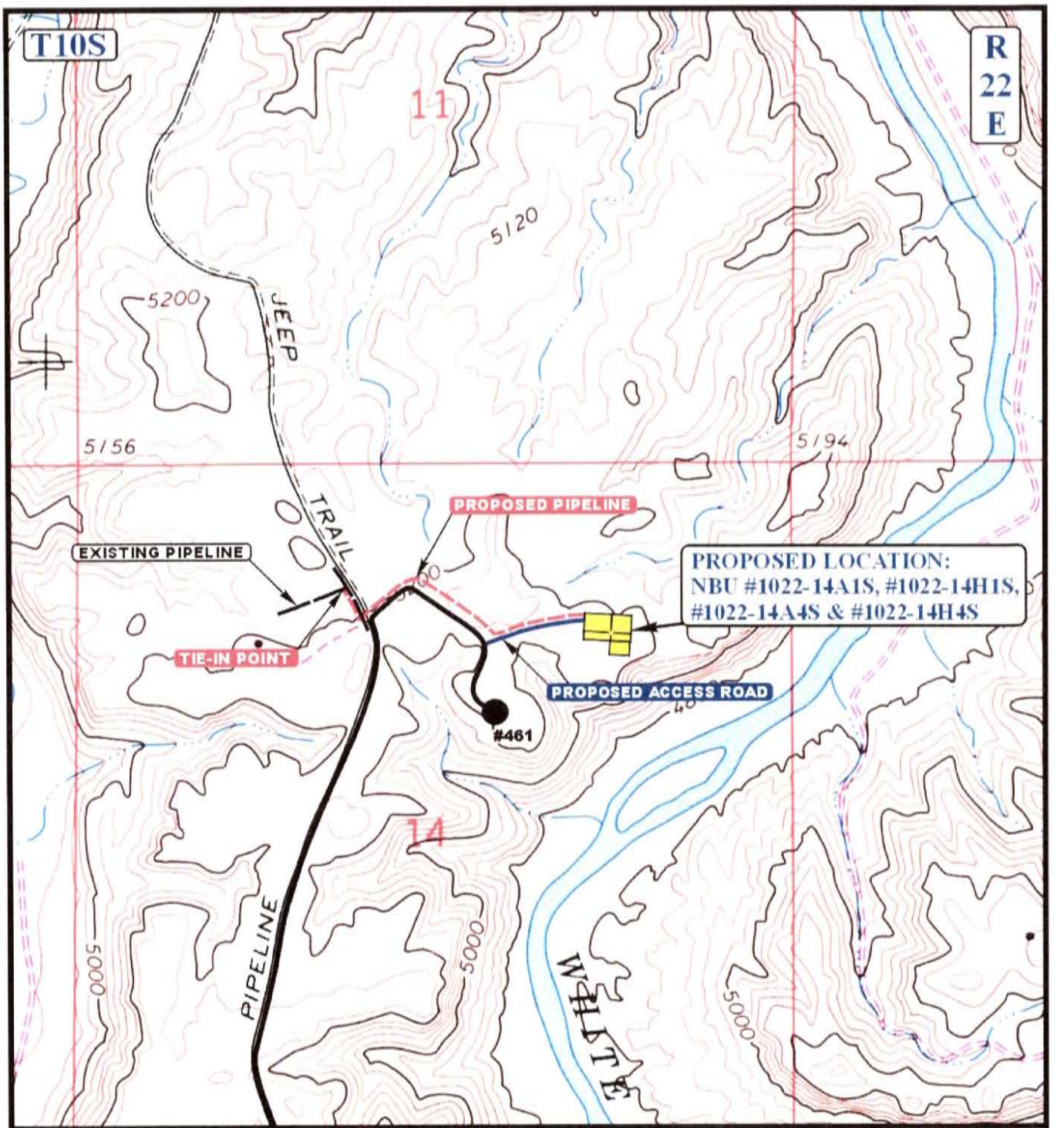
N

Kerr-McGee Oil & Gas Onshore LP

NBU #1022-14A1S, #1022-14H1S, #1022-14A4S & #1022-14H4S
SECTION 14, T10S, R22E, S.L.B.&M.
NW 1/4 NE 1/4

Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

TOPOGRAPHIC MAP	02 MONTH	23 DAY	07 YEAR
SCALE: 1" = 2000'	DRAWN BY: C.P.	REV: 08-21-08 J.J.	C TOPO



APPROXIMATE TOTAL 6" PIPELINE DISTANCE = 2,002' +/-

LEGEND:

PROPOSED ACCESS ROAD
EXISTING PIPELINE
PROPOSED PIPELINE

N

Kerr-McGee Oil & Gas Onshore LP

NBU #1022-14A1S, #1022-14H1S, #1022-14A4S & #1022-14H4S
SECTION 14, T10S, R22E, S.L.B.&M.
NW 1/4 NE 1/4

Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

TOPOGRAPHIC MAP	02 MONTH	23 DAY	07 YEAR	D TOPO
SCALE: 1" = 1000'	DRAWN BY: C.P.	REV: 08-21-08 J.J.		

Kerr-McGee Oil & Gas Onshore LP

NBU #1022-14A1S, #1022-14H1S, #1022-14A4S & #1022-14H4S

LOCATED IN UINTAH COUNTY, UTAH
SECTION 14, T10S, R22E, S.L.B.&M.

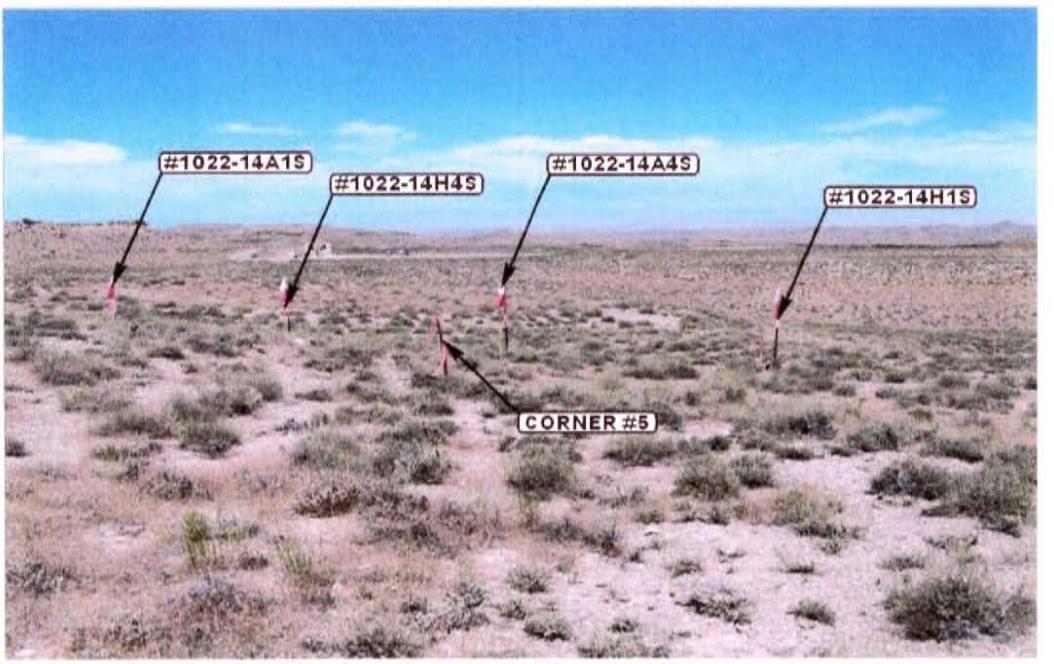


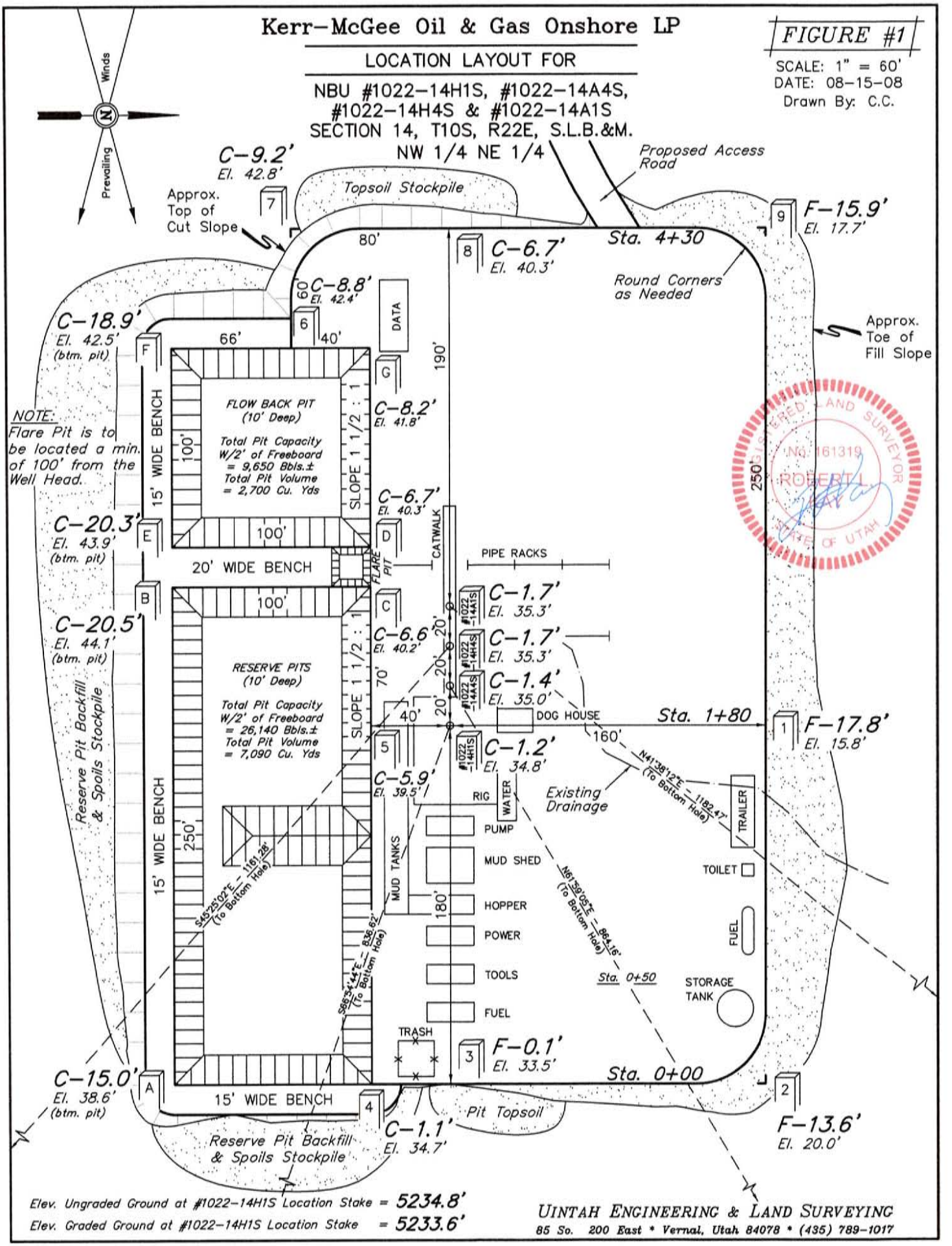
PHOTO: VIEW FROM CORNER #5 TO LOCATION STAKES — CAMERA ANGLE: NORTHERLY

PHOTO: VIEW FROM BEGINNING OF PROPOSED ACCESS — CAMERA ANGLE: EASTERLY

- Since 1964 -

Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

LOCATION PHOTOS	02 MONTH	23 DAY	07 YEAR	PHOTO
TAKEN BY: D.K.	DRAWN BY: C.P.	REV: 08-21-08 J.J.		



'API Well No: 43047502270000'

Kerr-McGee Oil & Gas Onshore LP

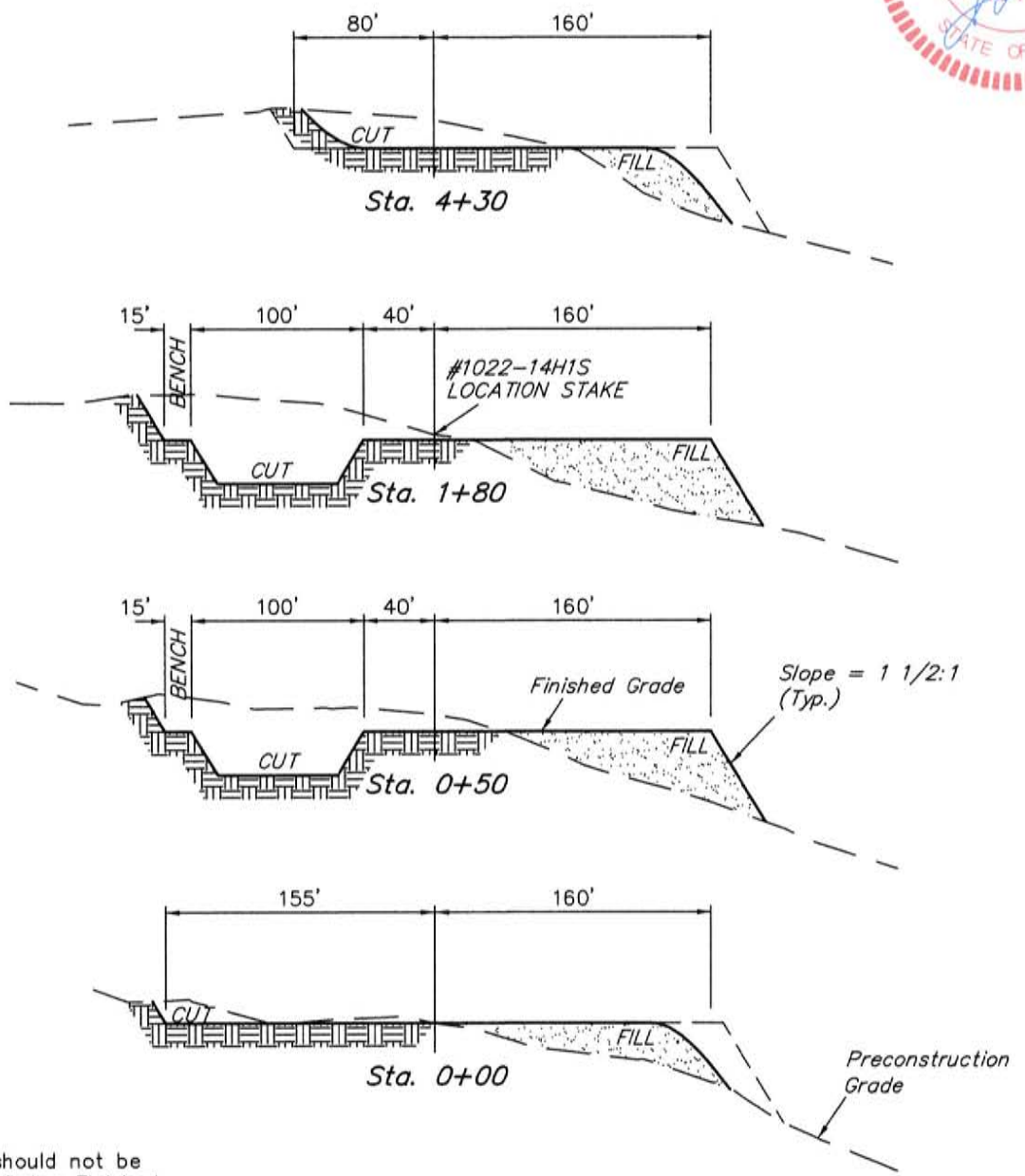
FIGURE #2

TYPICAL CROSS SECTIONS FOR

NBU #1022-14H1S, #1022-14A4S,
#1022-14H4S & #1022-14A1S
SECTION 14, T10S, R22E, S.L.B.&M.
NW 1/4 NE 1/4

1" = 40'
X-Section Scale
1" = 100'
DATE: 08-15-08
Drawn By: C.C.

REGISTERED LAND SURVEYOR
No. 161319
ROBERT L. KAY
STATE OF UTAH



NOTE:
Topsoil should not be Stripped Below Finished Grade on Substructure Area.

* NOTE:
FILL QUANTITY INCLUDES 5% FOR COMPACTION

APPROXIMATE YARDAGES

(6") Topsoil Stripping	= 3,060 Cu. Yds.
Remaining Location	= 28,940 Cu. Yds.
TOTAL CUT	= 32,000 CU.YDS.
FILL	= 21,540 CU.YDS.

EXCESS MATERIAL	= 10,460 Cu. Yds.
Topsoil & Pit Backfill (1/2 Pit Vol.)	= 7,960 Cu. Yds.
EXCESS UNBALANCE (After Interim Rehabilitation)	= 2,500 Cu. Yds.

UINTAH ENGINEERING & LAND SURVEYING
85 So. 200 East * Vernal, Utah 84078 * (435) 789-1017

Kerr-McGee Oil & Gas Onshore LP

NBU #1022-14A1S, #1022-14H1S, #1022-14A4S & #1022-14H4S

SECTION 14, T10S, R22E, S.L.B.&M.

PROCEED IN A WESTERLY DIRECTION FROM VERNAL, UTAH ALONG U.S. HIGHWAY 40 APPROXIMATELY 14.0 MILES TO THE JUNCTION OF STATE HIGHWAY 88; EXIT LEFT AND PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 17.0 MILES TO OURAY, UTAH; PROCEED IN A SOUTHERLY, THEN SOUTHEASTERLY DIRECTION APPROXIMATELY 11.2 MILES ON THE SEEP RIDGE ROAD TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE EAST; TURN LEFT AND PROCEED IN AN EASTERLY, THEN SOUTHEASTERLY DIRECTION APPROXIMATELY 12.3 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTH; TURN RIGHT AND PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 0.6 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTHEAST; TURN LEFT AND PROCEED IN A NORTHEASTERLY, THEN EASTERLY DIRECTION APPROXIMATELY 1.4 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTHEAST; TURN LEFT AND PROCEED IN A NORTHEASTERLY, THEN NORTHERLY DIRECTION APPROXIMATELY 2.3 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTHEAST; TURN RIGHT AND PROCEED IN A NORTHEASTERLY, THEN SOUTHEASTERLY DIRECTION APPROXIMATELY 0.2 MILES TO THE BEGINNING OF THE PROPOSED ACCESS TO THE EAST; FOLLOW ROAD FLAGS IN AN EASTERLY DIRECTION APPROXIMATELY 0.15 MILES TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 59.15 MILES.

Scientific Drilling
Rocky Mountain Operations

Project: Uintah County, UT
Site: NBU 1022-14B Pad
Well: NBU 1022-14A4S
Wellbore: OH
Design: Plan #1

Kerr McGee Oil and Gas Onshore LP

T M

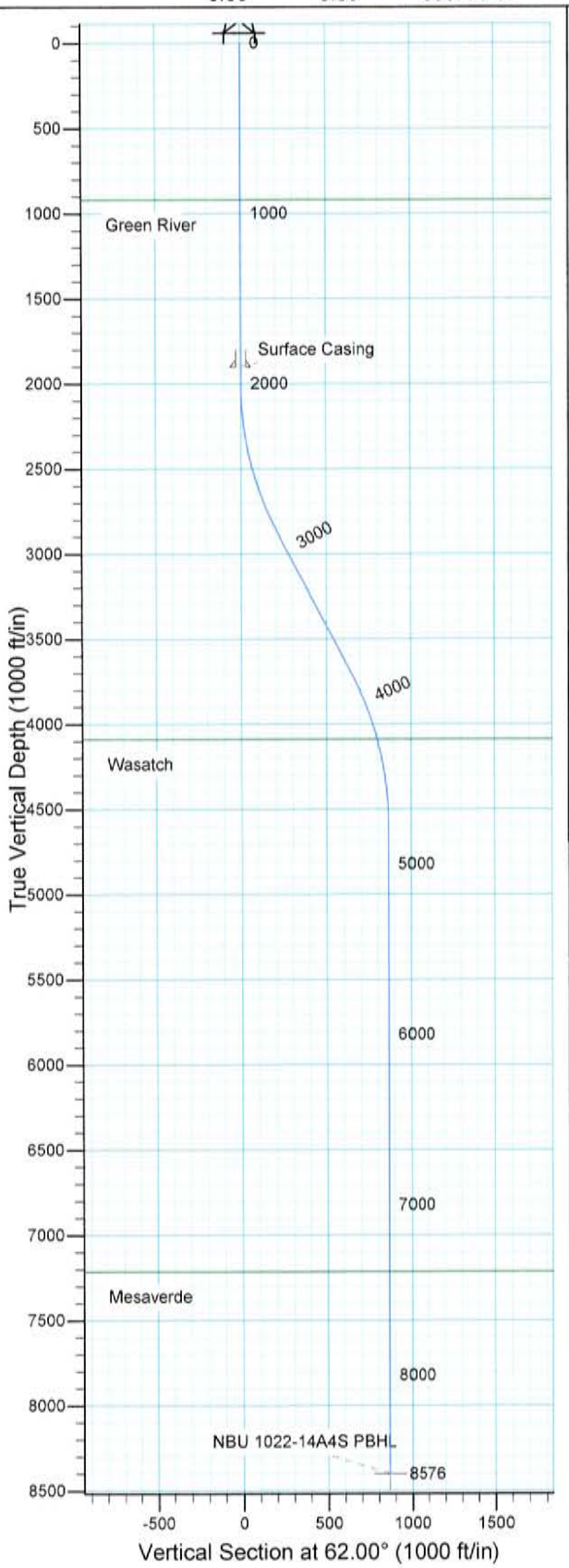
Azimuths to True North
Magnetic North: 11.35°

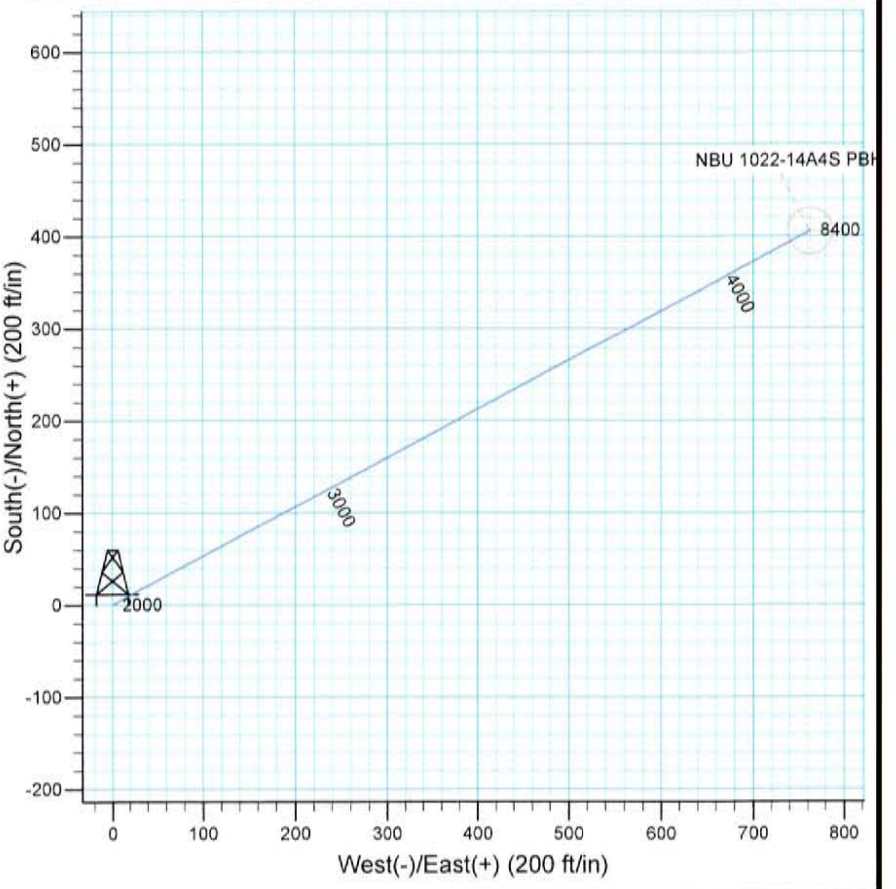
Magnetic Field
Strength: 52603.3snT
Dip Angle: 65.92°
Date: 10/21/2008
Model: IGRF2005-10

WELL DETAILS: NBU 1022-14A4S

GL 5234' & RKB 18' @ 5252.00ft 5234.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	596778.57	2588119.98	39° 57' 10.340 N	109° 24' 6.870 W





Plan: Plan #1 (NBU 1022-14A4S/OH)

Created By: Julie Cruse Date: 2008-10-21

PROJECT DETAILS: Uintah County, UT

Geodetic System:	US State Plane 1927 (Exact solution)
Datum:	NAD 1927 (NADCON CONUS)
Ellipsoid:	Clarke 1866
Zone:	Utah Central 4302
Location:	Sec 14 T10S R22E
System Datum:	Mean Sea Level
Local North:	True

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	0.00	
2924.26	27.73	62.00	2888.61	102.96	193.65	3.00	62.00	219.31	
3839.11	27.73	62.00	3698.39	302.78	569.48	0.00	0.00	644.97	
4763.37	0.00	0.00	4587.00	405.74	763.12	3.00	180.00	864.28	
8576.37	0.00	0.00	8400.00	405.74	763.12	0.00	0.00	864.28	NBU 1022-14A4S PBHL

'API Well No: 43047502270000'

Scientific Drilling
Rocky Mountain Operations

Kerr McGee Oil and Gas Onshore LP

Uintah County, UT
NBU 1022-14B Pad
NBU 1022-14A4S
OH

Plan: Plan #1

Standard Planning Report

21 October, 2008

Database:	EDM 2003.16 Multi User DB	**Local Co-ordinate Reference:**	Well NBU 1022-14A4S
Company:	Kerr McGee Oil and Gas Onshore LP	**TVD Reference:**	GL 5234' & RKB 18' @ 5252.00ft
Project:	Uintah County, UT	**MD Reference:**	GL 5234' & RKB 18' @ 5252.00ft
Site:	NBU 1022-14B Pad	**North Reference:**	True
Well:	NBU 1022-14A4S	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Project	Uintah County, UT		
Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Utah Central 4302		

Site	NBU 1022-14B Pad, Sec 14 T10S R22E				
Site Position:		**Northing:**	596,779.66 ft	**Latitude:**	39° 57' 10.360 N
From:	Lat/Long	**Easting:**	2,588,080.23 ft	**Longitude:**	109° 24' 7.380 W
Position Uncertainty:	0.00 ft	**Slot Radius:**	in	**Grid Convergence:**	1.34 °

Well	NBU 1022-14A4S, 1230' FNL 1377' FEL					
Well Position	**+N/-S**	0.00 ft	**Northing:**	596,778.57 ft	**Latitude:**	39° 57' 10.340 N
	+E/-W	0.00 ft	**Easting:**	2,588,119.98 ft	**Longitude:**	109° 24' 6.870 W
Position Uncertainty		0.00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	5,234.00 ft

Wellbore	OH				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2005-10	10/21/2008	11.35	65.92	52,603

Design	Plan #1				
Audit Notes:					
Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00
Vertical Section:	**Depth From (TVD) (ft)**	**+N/-S (ft)**	**+E/-W (ft)**	**Direction (°)**	
	0.00	0.00	0.00	62.00	

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,924.26	27.73	62.00	2,888.61	102.96	193.65	3.00	3.00	0.00	62.00	
3,839.11	27.73	62.00	3,698.39	302.78	569.48	0.00	0.00	0.00	0.00	
4,763.37	0.00	0.00	4,587.00	405.74	763.12	3.00	-3.00	0.00	180.00	
8,576.37	0.00	0.00	8,400.00	405.74	763.12	0.00	0.00	0.00	0.00	NBU 1022-14A4S PB

Database:	EDM 2003.16 Multi User DB	**Local Co-ordinate Reference:**	Well NBU 1022-14A4S
Company:	Kerr McGee Oil and Gas Onshore LP	**TVD Reference:**	GL 5234' & RKB 18' @ 5252.00ft
Project:	Uintah County, UT	**MD Reference:**	GL 5234' & RKB 18' @ 5252.00ft
Site:	NBU 1022-14B Pad	**North Reference:**	True
Well:	NBU 1022-14A4S	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
919.00	0.00	0.00	919.00	0.00	0.00	0.00	0.00	0.00	0.00
Green River									
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
Surface Casing									
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	3.00	62.00	2,099.95	1.23	2.31	2.62	3.00	3.00	0.00
2,200.00	6.00	62.00	2,199.63	4.91	9.24	10.46	3.00	3.00	0.00
2,300.00	9.00	62.00	2,298.77	11.04	20.76	23.51	3.00	3.00	0.00
2,400.00	12.00	62.00	2,397.08	19.59	36.85	41.74	3.00	3.00	0.00
2,500.00	15.00	62.00	2,494.31	30.55	57.46	65.08	3.00	3.00	0.00
2,600.00	18.00	62.00	2,590.18	43.88	82.53	93.48	3.00	3.00	0.00
2,700.00	21.00	62.00	2,684.43	59.55	112.01	126.85	3.00	3.00	0.00
2,800.00	24.00	62.00	2,776.81	77.51	145.79	165.12	3.00	3.00	0.00
2,900.00	27.00	62.00	2,867.06	97.72	183.80	208.16	3.00	3.00	0.00
2,924.26	27.73	62.00	2,888.61	102.96	193.65	219.31	3.00	3.00	0.00
3,000.00	27.73	62.00	2,955.65	119.50	224.76	254.55	0.00	0.00	0.00
3,100.00	27.73	62.00	3,044.16	141.34	265.84	301.08	0.00	0.00	0.00
3,200.00	27.73	62.00	3,132.68	163.18	306.92	347.61	0.00	0.00	0.00
3,300.00	27.73	62.00	3,221.20	185.03	348.00	394.13	0.00	0.00	0.00
3,400.00	27.73	62.00	3,309.71	206.87	389.09	440.66	0.00	0.00	0.00
3,500.00	27.73	62.00	3,398.23	228.71	430.17	487.19	0.00	0.00	0.00
3,600.00	27.73	62.00	3,486.75	250.55	471.25	533.72	0.00	0.00	0.00
3,700.00	27.73	62.00	3,575.26	272.40	512.33	580.24	0.00	0.00	0.00
3,800.00	27.73	62.00	3,663.78	294.24	553.41	626.77	0.00	0.00	0.00
3,839.11	27.73	62.00	3,698.39	302.78	569.48	644.97	0.00	0.00	0.00
3,900.00	25.90	62.00	3,752.74	315.67	593.73	672.43	3.00	-3.00	0.00
4,000.00	22.90	62.00	3,843.80	335.07	630.20	713.74	3.00	-3.00	0.00
4,100.00	19.90	62.00	3,936.89	352.19	662.42	750.23	3.00	-3.00	0.00
4,200.00	16.90	62.00	4,031.77	367.01	690.29	781.79	3.00	-3.00	0.00
4,257.47	15.18	62.00	4,087.00	374.47	704.31	797.67	3.00	-3.00	0.00
Wasatch									
4,300.00	13.90	62.00	4,128.16	379.48	713.73	808.34	3.00	-3.00	0.00
4,400.00	10.90	62.00	4,225.82	389.56	732.69	829.82	3.00	-3.00	0.00
4,500.00	7.90	62.00	4,324.47	397.22	747.12	846.15	3.00	-3.00	0.00

Database:	EDM 2003.16 Multi User DB	**Local Co-ordinate Reference:**	Well NBU 1022-14A4S
Company:	Kerr McGee Oil and Gas Onshore LP	**TVD Reference:**	GL 5234' & RKB 18' @ 5252.00ft
Project:	Uintah County, UT	**MD Reference:**	GL 5234' & RKB 18' @ 5252.00ft
Site:	NBU 1022-14B Pad	**North Reference:**	True
Well:	NBU 1022-14A4S	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,600.00	4.90	62.00	4,423.83	402.46	756.96	857.30	3.00	-3.00	0.00
4,700.00	1.90	62.00	4,523.64	405.24	762.20	863.23	3.00	-3.00	0.00
4,763.37	0.00	0.00	4,587.00	405.74	763.12	864.28	3.00	-3.00	0.00
4,800.00	0.00	0.00	4,623.63	405.74	763.12	864.28	0.00	0.00	0.00
4,900.00	0.00	0.00	4,723.63	405.74	763.12	864.28	0.00	0.00	0.00
5,000.00	0.00	0.00	4,823.63	405.74	763.12	864.28	0.00	0.00	0.00
5,100.00	0.00	0.00	4,923.63	405.74	763.12	864.28	0.00	0.00	0.00
5,200.00	0.00	0.00	5,023.63	405.74	763.12	864.28	0.00	0.00	0.00
5,300.00	0.00	0.00	5,123.63	405.74	763.12	864.28	0.00	0.00	0.00
5,400.00	0.00	0.00	5,223.63	405.74	763.12	864.28	0.00	0.00	0.00
5,500.00	0.00	0.00	5,323.63	405.74	763.12	864.28	0.00	0.00	0.00
5,600.00	0.00	0.00	5,423.63	405.74	763.12	864.28	0.00	0.00	0.00
5,700.00	0.00	0.00	5,523.63	405.74	763.12	864.28	0.00	0.00	0.00
5,800.00	0.00	0.00	5,623.63	405.74	763.12	864.28	0.00	0.00	0.00
5,900.00	0.00	0.00	5,723.63	405.74	763.12	864.28	0.00	0.00	0.00
6,000.00	0.00	0.00	5,823.63	405.74	763.12	864.28	0.00	0.00	0.00
6,100.00	0.00	0.00	5,923.63	405.74	763.12	864.28	0.00	0.00	0.00
6,200.00	0.00	0.00	6,023.63	405.74	763.12	864.28	0.00	0.00	0.00
6,300.00	0.00	0.00	6,123.63	405.74	763.12	864.28	0.00	0.00	0.00
6,400.00	0.00	0.00	6,223.63	405.74	763.12	864.28	0.00	0.00	0.00
6,500.00	0.00	0.00	6,323.63	405.74	763.12	864.28	0.00	0.00	0.00
6,600.00	0.00	0.00	6,423.63	405.74	763.12	864.28	0.00	0.00	0.00
6,700.00	0.00	0.00	6,523.63	405.74	763.12	864.28	0.00	0.00	0.00
6,800.00	0.00	0.00	6,623.63	405.74	763.12	864.28	0.00	0.00	0.00
6,900.00	0.00	0.00	6,723.63	405.74	763.12	864.28	0.00	0.00	0.00
7,000.00	0.00	0.00	6,823.63	405.74	763.12	864.28	0.00	0.00	0.00
7,100.00	0.00	0.00	6,923.63	405.74	763.12	864.28	0.00	0.00	0.00
7,200.00	0.00	0.00	7,023.63	405.74	763.12	864.28	0.00	0.00	0.00
7,300.00	0.00	0.00	7,123.63	405.74	763.12	864.28	0.00	0.00	0.00
7,390.37	0.00	0.00	7,214.00	405.74	763.12	864.28	0.00	0.00	0.00
Mesaverde									
7,400.00	0.00	0.00	7,223.63	405.74	763.12	864.28	0.00	0.00	0.00
7,500.00	0.00	0.00	7,323.63	405.74	763.12	864.28	0.00	0.00	0.00
7,600.00	0.00	0.00	7,423.63	405.74	763.12	864.28	0.00	0.00	0.00
7,700.00	0.00	0.00	7,523.63	405.74	763.12	864.28	0.00	0.00	0.00
7,800.00	0.00	0.00	7,623.63	405.74	763.12	864.28	0.00	0.00	0.00
7,900.00	0.00	0.00	7,723.63	405.74	763.12	864.28	0.00	0.00	0.00
8,000.00	0.00	0.00	7,823.63	405.74	763.12	864.28	0.00	0.00	0.00
8,100.00	0.00	0.00	7,923.63	405.74	763.12	864.28	0.00	0.00	0.00
8,200.00	0.00	0.00	8,023.63	405.74	763.12	864.28	0.00	0.00	0.00
8,300.00	0.00	0.00	8,123.63	405.74	763.12	864.28	0.00	0.00	0.00
8,400.00	0.00	0.00	8,223.63	405.74	763.12	864.28	0.00	0.00	0.00
8,500.00	0.00	0.00	8,323.63	405.74	763.12	864.28	0.00	0.00	0.00
8,576.37	0.00	0.00	8,400.00	405.74	763.12	864.28	0.00	0.00	0.00

Database:	EDM 2003.16 Multi User DB	**Local Co-ordinate Reference:**	Well NBU 1022-14A4S
Company:	Kerr McGee Oil and Gas Onshore LP	**TVD Reference:**	GL 5234' & RKB 18' @ 5252.00ft
Project:	Uintah County, UT	**MD Reference:**	GL 5234' & RKB 18' @ 5252.00ft
Site:	NBU 1022-14B Pad	**North Reference:**	True
Well:	NBU 1022-14A4S	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
NBU 1022-14A4S PBHL - plan hits target center - Circle (radius 25.00)	0.00	0.00	8,400.00	405.74	763.12	597,202.09	2,588,873.38	39° 57' 14.350 N	109° 23' 57.070 W

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
1,900.00	1,900.00	Surface Casing	9.625	13.500

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
919.00	919.00	Green River		0.00	
4,257.47	4,087.00	Wasatch		0.00	
7,390.37	7,214.00	Mesaverde		0.00	

IPC #08-135

Paleontological Reconnaissance Survey Report

Survey of Kerr McGee's Proposed Twin Wells "NBU #1022-14F2T, 14C4S, 14D3S & 14F4S" & "NBU #1022-14A1S, 14A4S, 14H1S & 14H4S" (Sec. 14, T 10 S, R 22 E) & "Bonanza #1023-5IS" (Sec. 5, T 10 S, R 23 E)

Archy Bench & Asphalt Wash
Topographic Quadrangle
Uintah County, Utah

August 20, 2008

Prepared by Stephen D. Sandau
Paleontologist for
Intermountain Paleo-Consulting
P. O. Box 1125
Vernal, Utah 84078

INTRODUCTION

At the request of Raleen White of Kerr McGee Onshore LP and authorized by the BLM Vernal Field Office and James Kirkland of the Office of the State Paleontologist, a paleontological reconnaissance survey of Kerr McGee's proposed twin wells "NBU #1022-14F2T, 14C4S, 14D3S & 14F4S" & "NBU #1022-14A1S, 14A4S, 14H1S & 14H4S" (Sec. 14, T 10 S, R 22 E) & "Bonanza #1023-5IS" (Sec. 5, T 10 S, R 23 E) was conducted by Simon Masters and Amanda Dopheide on July 12, 2008. The reconnaissance survey was conducted under the Utah BLM Paleontological Resources Use Permit #UT08-006C and Utah Paleontological Investigations Permit #07-356. This survey to locate, identify, and evaluate paleontological resources was done to meet requirements of the National Environmental Policy Act of 1969 and other State and Federal laws and regulations that protect paleontological resources.

FEDERAL AND STATE REQUIREMENTS

As mandated by the Federal and State government, paleontologically sensitive geologic formations on State lands that are considered for exchange or may be impacted due to ground disturbance require paleontological evaluation. This requirement complies with:

1) The National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321.et. Seq., P.L. 91-190);
2) The Federal Land Policy and Management Act (FLPMA) of 1976 (90 Stat. 2743, 43 U.S.C. § 1701-1785, et. Seq., P.L. 94-579);
3) The National Historic Preservation Act.16 U.S.C. § 470-1, P.L. 102-575 in conjunction with 42 U.S.C. § 5320; and
4) The Utah Geological Survey. S. C. A.: 63-73-1. (1-21) and U.C.A.: 53B-17-603

The new Potential Fossil Yield Classification (PFYC) System (October, 2007) replaces the Condition Classification System from Handbook H-8270-1. Geologic units are classified based on the relative abundance of vertebrate fossils or scientifically significant invertebrate or plant fossils and their sensitivity to adverse impacts, with a higher class number indicating a higher potential.

- ***Class 1*** **– Very Low**. Geologic units (igneous, metamorphic, or Precambrian) not likely to contain recognizable fossil remains.
- ***Class 2*** **– Low.** Sedimentary geologic units not likely to contain vertebrate fossils or scientifically significant non-vertebrate fossils. (Including modern eolian, fluvial, and colluvial deposits etc…)
- ***Class 3*** **– Moderate or Unknown.** Fossiliferous sedimentary geologic units where fossil content varies in significance, abundance, and predictable occurrence; or sedimentary units of unknown fossil potential.
    - ***Class 3a*** **– Moderate Potential.** The potential for a project to be sited on or impact a significant fossil locality is low, but is somewhat higher for common fossils.

  - ***Class 3b* – Unknown Potential.** Units exhibit geologic features and preservational conditions that suggest significant fossils could be present, but little information about the paleontological resources of the unit or the area is known.
- ***Class 4* – High.** Geologic units containing a high occurrence of vertebrate fossils or scientifically significant invertebrate or plant fossils, but may vary in abundance and predictability.
  - ***Class 4a*** – Outcrop areas with high potential are extensive (greater than two acres) and paleontological resources may be susceptible to adverse impacts from surface disturbing actions.
  - ***Class 4b*** – Areas underlain by geologic units with high potential but have lowered risks of disturbance due to moderating circumstances such as a protective layer of soil or alluvial material; or outcrop areas are smaller than two contiguous acres.
- ***Class 5* – Very High.** Highly fossiliferous geologic units that consistently and predictably produce vertebrate fossils or scientifically significant invertebrate or plant fossils.
  - ***Class 5a*** - Outcrop areas with very high potential are extensive (greater than two acres) and paleontological resources may be susceptible to adverse impacts from surface disturbing actions.
  - ***Class 5b*** - Areas underlain by geologic units with very high potential but have lowered risks of disturbance due to moderating circumstances such as a protective layer of soil or alluvial material; or outcrop areas are smaller than two contiguous acres.

It should be noted that many fossils, though common and unimpressive in and of themselves, can be important paleo-environmental, depositional, and chronostratigraphic indicators.

LOCATION

Kerr McGee's proposed twin wells "NBU #1022-14F2T, 14C4S, 14D3S & 14F4S" & "NBU #1022-14A1S, 14A4S, 14H1S & 14H4S" (Sec. 14, T 10 S, R 22 E) & "Bonanza #1023-5IS" (Sec. 5, T 10 S, R 23 E) are on lands managed by the BLM and the State of Utah Trust Lands Administration (SITLA), east of East Bench, 17-20 miles southeast of Ouray, Utah, 15-20 miles south and southwest of Red Wash, Utah and 11-14 miles southwest of Bonanza, Utah. The project area can be found on the Archy Bench and Asphalt Wash 7.5 minute U. S. Geological Survey Quadrangle Map, Uintah County, Utah.

PREVIOUS WORK

The basins of western North America have long produced some of the richest fossil collections in the world. Early Cenozoic sediments are especially well represented throughout the western interior. Paleontologists started field work in Utah's Uinta Basin as early as 1870

(Betts, 1871; Marsh, 1871, 1875a, 1875b). The Uinta Basin is located in the northeastern corner of Utah and covers approximately 31,000 sq. km (12,000 sq. miles) ranging in elevation from 1,465 to 2,130 m (4,800 to 7,000 ft) (Marsell, 1964; Hamblin et al., 1987). Middle to late Eocene time marked a period of dramatic change in the climate, flora, (Stucky, 1992) and fauna (Black and Dawson, 1966) of North America.

GEOLOGICAL AND PALEONTOLOGICAL OVERVIEW

Early in the geologic history of Utah, some 1,000 to 600 Ma, an east-west trending basin developed creating accommodation for 25,000 feet of siliclastics. Uplift of that filled-basin during the early Cenozoic formed the Uinta Mountains (Rasmussen et al., 1999). With the rise of the Uinta Mountains the asymmetrical synclinal Uinta Basin is thought to have formed through the effects of down warping in connection with the uplift. Throughout the Paleozoic and Mesozoic deposition fluctuated between marine and non-marine environments laying down a thick succession of sediments in the area now occupied by the Uinta Basin. Portions of these beds crop out on the margins of the basin due to tectonic events during the late Mesozoic.

Early Tertiary Uinta Basin sediments were deposited in alternating lacustrine and fluvial environments. Large shallow lakes periodically covered most of the basin and surrounding areas during early to mid Eocene time (Abbott, 1957). These lacustrine sediments show up in the western part of the basin, dipping 2-3 degrees to the northeast and are lost in the subsurface on the east side. The increase of cross-bedded, coarse-grained sandstone and conglomerates preserved in paleo-channels indicates a transition to a fluvial environment toward the end of the epoch.

Four Eocene formations are recognized in the Uinta Basin: the Wasatch, Green River, Uinta and Duchesne River, respectively (Wood, 1941). The Uinta Formation is subdivided into two lithostratigraphic units namely: the Wagonhound Member (Wood, 1934), formerly known as Uinta A and B (Osborn, 1895, 1929) and the Myton Member previously regarded as the Uinta C.

Within the Uinta Basin in northeast Utah, the Uinta Formation in the western part of the basin is composed primarily of lacustrine sediments inter-fingering with over-bank deposits of silt and mudstone and westward flowing channel sands and fluvial clays, muds, and sands in the east (Bryant et al, 1990; Ryder et al, 1976). Stratigraphic work done by early geologists and paleontologists within the Uinta Formation focused on the definition of rock units and attempted to define a distinction between early and late Uintan faunas (Riggs, 1912; Peterson and Kay, 1931; Kay 1934). More recent work focused on magnetostratigraphy, radioscopic chronology, and continental biostratigraphy (Flynn, 1986; Prothero, 1996). Well-known for its fossiliferous nature and distinctive mammalian fauna of mid-Eocene Age, the Uinta Formation is the type formation for the Uintan Land Mammal Age (Wood et al, 1941).

The Duchesne River Formation of the Uinta Basin in northeastern Utah is composed of a succession of fluvial and flood plain deposits composed of mud, silt and sandstone. The source area for these late Eocene deposits is from the Uinta Mountains indicated by paleocurrent data (Anderson and Picard, 1972). In Peterson's (1931c) paper, the name "Duchesne Formation" was

applied to the formation and it was later changed to the "Duchesne River Formation" by Kay (1934). The formation is divided up into four members: the Brennan Basin, Dry Gulch Creek, LaPoint, and Starr Flat (Anderson and Picard, 1972). Debates concerning the Duchesne River Formation, as to whether its age was late Eocene or early Oligocene, have surfaced throughout the literature of the last century (Wood et al., 1941; Scott 1945). Recent paleo-magnetostratigraphic work (Prothero, 1996) shows that the Duchesne River Formation is late Eocene in time.

FIELD METHODS

In order to determine if the proposed project area contained any paleontological resources, a reconnaissance survey was performed. An on-site observation of the proposed areas undergoing surficial disturbance is necessary because judgments made from topographic maps alone are often unreliable. Areas of low relief have potential to be erosional surfaces with the possibility of bearing fossil materials rather than surfaces covered by unconsolidated sediment or soils.

When found within the proposed construction areas, outcrops and erosional surfaces were checked to determine if fossils were present and to assess needs. Careful effort is made during surveys to identify and evaluate significant fossil materials or fossil horizons when they are found. Microvertebrates, although rare, are occasionally found in anthills or upon erosional surfaces and are of particular importance.

PROJECT AREA

The project area is situated in the Wagonhound Member (Uinta B) of the Uinta Formation. The following list provides a description of the proposed twin wells.

NBU #1022-14F2T, 14C4S, 14D3S & 14F4S
The proposed well for "NBU #1022-14F2T" is a twin to "CIGE # 43" located in the NW/NW quarter-quarter section of Sec. 14, T 10 S, R 22 E (Figure 1). It is staked on relatively flat ground that has been previously disturbed. The undisturbed ground is covered in colluvium and cobble-sized pieces of purple sandstone. An outcrop of purple sandstone was observed approximately 3 ft. south of the existing well pad. No fossils were found.

NBU #1022-14A1S, 14A4S, 14H1S & 14H4S
The proposed access road travels100 ft. east from the existing well "NBU #461" to the proposed well pad "NBU #1022-14A" located in the SW/NE quarter-quarter section of Sec. 14, T 10 S, R 22 E (Figure 1). The proposed access road and well pad are staked on relatively flat ground covered by previously disturbed soil, colluvium, and cobble-sized pieces of purple sandstone. No fossils were found.

Bonanza #1023-5IS
The proposed well "Bonanza #1023-5IS" is a twin to well "Southman Canyon #4-5", and is located on the existing "Southman Canyon 4-5" well pad in the NE/SE quarter-quarter section of Sec. 5, T 10 S, R 23 E (Figure 2). The proposed well is situated primarily on level ground that has been previously disturbed. Undisturbed ground is covered with colluvium and cobble-sized pieces of purple sandstone. No fossils were found.

SURVEY RESULTS

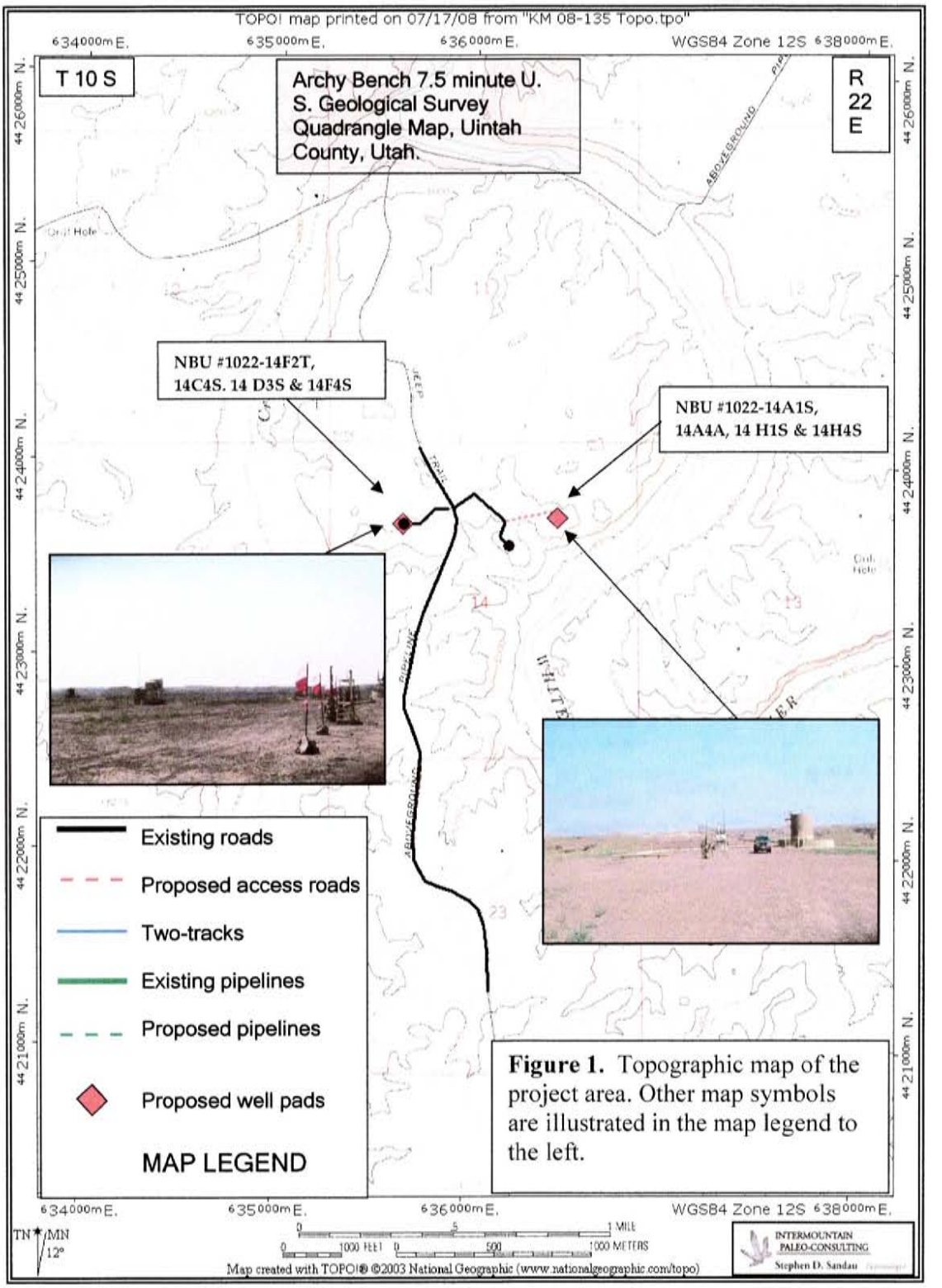
PROJECT	GEOLOGY	PALEONTOLOGY
"NBU #1022-14F2T, 14C4S, 14D3S & 14F4S" (Sec. 14, T 10 S, R 22 E)	The proposed well is staked on relatively flat ground that has been previously disturbed. Undisturbed ground is covered in colluvium and cobble-sized pieces of purple sandstone. An outcrop of purple sandstone was observed approximately 3 ft. south of the existing well pad.	No fossils were found. **Class 3a**
"NBU #1022-14A1S, 14A4S, 14H1S & 14H4S" (Sec. 14, T 10 S, R 22 E)	The proposed access road and well pad are staked on relatively flat ground covered by previously disturbed soil, colluvium, and cobble-sized pieces of purple sandstone.	No fossils were found. **Class 3a**
"Bonanza #1023-5IS" (Sec. 5, T 10 S, R 23 E)	The proposed well is situated primarily on level ground that has been previously disturbed. Undisturbed ground is covered with colluvium and cobble-sized pieces of purple sandstone.	No fossils were found. **Class 3a**

RECOMMENDATIONS

A reconnaissance survey was conducted for Kerr McGee's proposed twin wells "NBU #1022-14F2T, 14C4S, 14D3S & 14F4S" & "NBU #1022-14A1S, 14A4S, 14H1S & 14H4S" (Sec. 14, T 10 S, R 22 E) & "Bonanza #1023-5IS" (Sec. 5, T 10 S, R 23 E). The proposed well pads and the access road covered in this report showed no signs of vertebrate fossils. Therefore, we recommend that no paleontological restrictions should be placed on the development of the projects included in this report.

Buried pipeline will encounter Uinta formational sediments along most of the staked pipeline corridors yet indications from surface fossils predict that little if any vertebrate fossils will be disturbed.

Nevertheless, if any vertebrate fossil(s) are found during construction within the project area, Operator (Lease Holder) will report all occurrences of paleontological resources discovered to a geologist with the Vernal Field Office of the BLM and the Office of the State Paleontologist. The operator is responsible for informing all persons in the areas who are associated with this project of the requirements for protecting paleontological resources. Paleontological resources found on the public lands are recognized by the BLM and State as constituting a fragile and nonrenewable scientific record of the history of life on earth, and so represent an important and critical component of America's natural heritage. These resources are afforded protection under 43 CFR 3802 and 3809, and penalties possible for the collection of vertebrate fossils are under 43 CFR 8365.1-5.



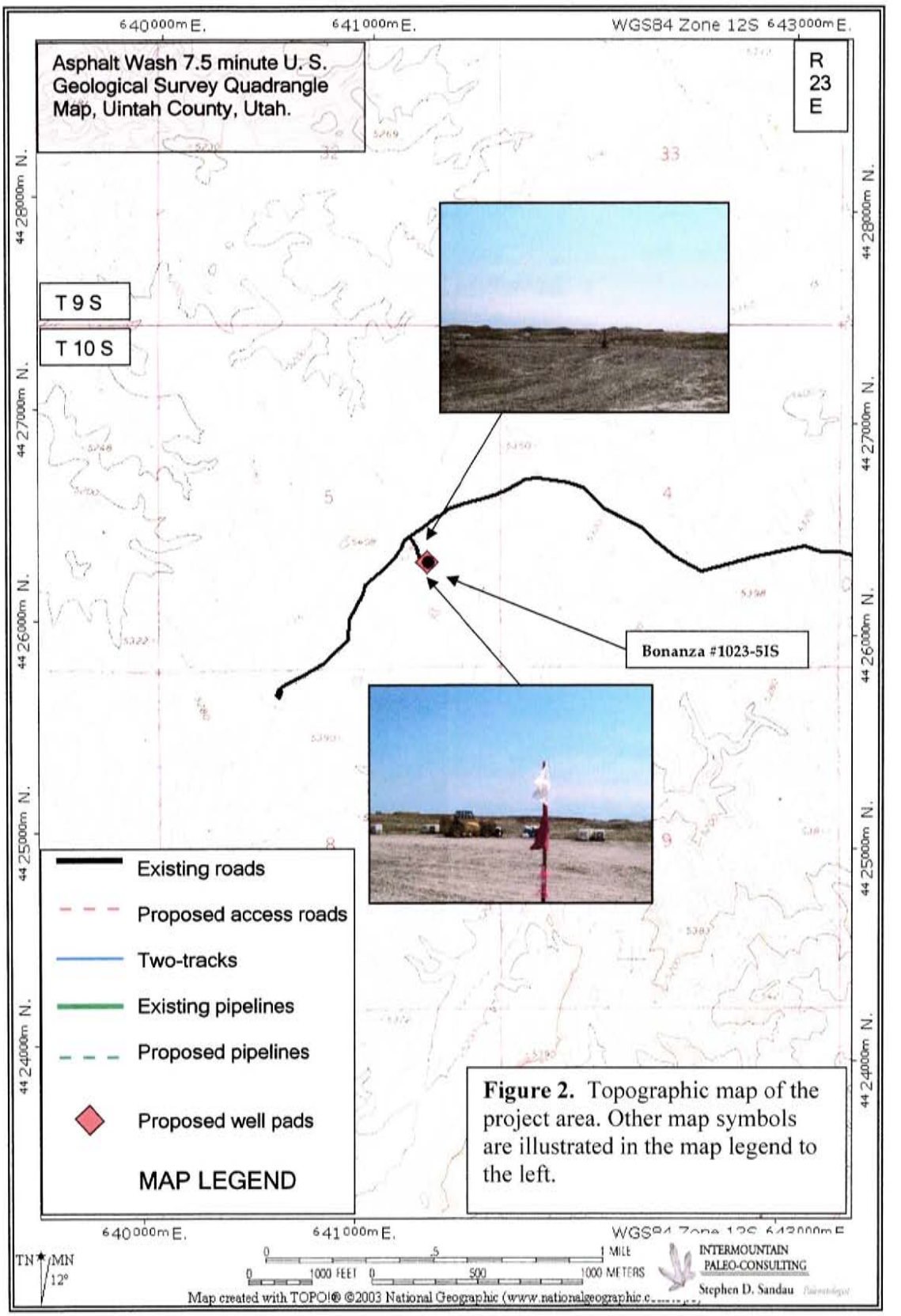


Figure 2. Topographic map of the project area. Other map symbols are illustrated in the map legend to the left.

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CLASS I REVIEW OF KERR-MCGEE OIL AND GAS
ONSHORE LP'S PROPOSED NBU WELL LOCATIONS, TEMPORARY
WORK AREA, PIPELINE ROW, AND PIPELINE ROW EXTENSION,
TOWNSHIP 10S, RANGE 22E
UINTAH COUNTY, UTAH

CLASS I REVIEW OF KERR-MCGEE OIL AND GAS ONSHORE LP'S PROPOSED NBU WELL LOCATIONS, TEMPORARY WORK AREA, PIPELINE ROW, AND PIPELINE ROW EXTENSION, TOWNSHIP 10S, RANGE 22E UINTAH COUNTY, UTAH

By:

Jacki A. Montgomery

Prepared For:

Bureau of Land Management
Vernal Field Office
and
State of Utah
School & Institutional Trust Lands Administration

Prepared Under Contract With:

Kerr-McGee Oil and Gas Onshore LP
1368 South 1200 East
Vernal, Utah 84078

Prepared By:

Montgomery Archaeological Consultants, Inc.
P.O. Box 219
Moab, Utah 84532

MOAC Report No. 08-236

September 16, 2008

United States Department of Interior (FLPMA)
Permit No. 08-UT-60122

Public Lands Policy Coordination Office
Archaeological Survey Permit No. 117

INTRODUCTION

A Class I literature review was completed Montgomery Archaeological Consultants Inc. (MOAC) in September 2008 of Kerr-McGee Onshore's proposed NBU well locations in Township 10S, Range 22E. The project area is situated east and west of the White River, south of the town of Vernal, Uintah County, Utah. The well pads are designated NBU 1022-01CT, 1022-03CT, 1022-03FT, 1022-03GT, 1022-04AT, 1022-04GT, 1022-04HT, 1022-05BT, 1022-05IT, 1022-05JT, 1022-7A4BS, 1022-7AT, 1022-7A4CS, 1022-7B2DS, 1022-10A2T, 1022-10FT, 1022-10HT, 1022-14A1S, 1022-14A4S, 1022-14H1S, and 1022-14H4S. In addition, the proposed White River to 83X lateral pipeline and work station are included in this review. This document was implemented at the request of Ms. Raleen White, Kerr-McGee Onshore LP, Denver, Colorado. Land status is public land administered by the Bureau of Land Management (BLM) Vernal Field Office and State of Utah School & Institutional Trust Lands Administration (SITLA).

The purpose of this Class I review is to identify, classify, and evaluate the previously conducted cultural resource inventories and archaeological sites in the project area in order to comply with Section 106 of 36 CFR 800, the National Historic Preservation Act of 1966 (as amended). Also, the inventory was implemented to attain compliance with a number of federal and state mandates, including the National Environmental Policy Act of 1969, the Archaeological and Historic Conservation Act of 1972, the Archaeological Resources Protection Act of 1979, the American Indian Religious Freedom Act of 1978, and the Utah State Antiquities Act of 1973 (amended 1990).

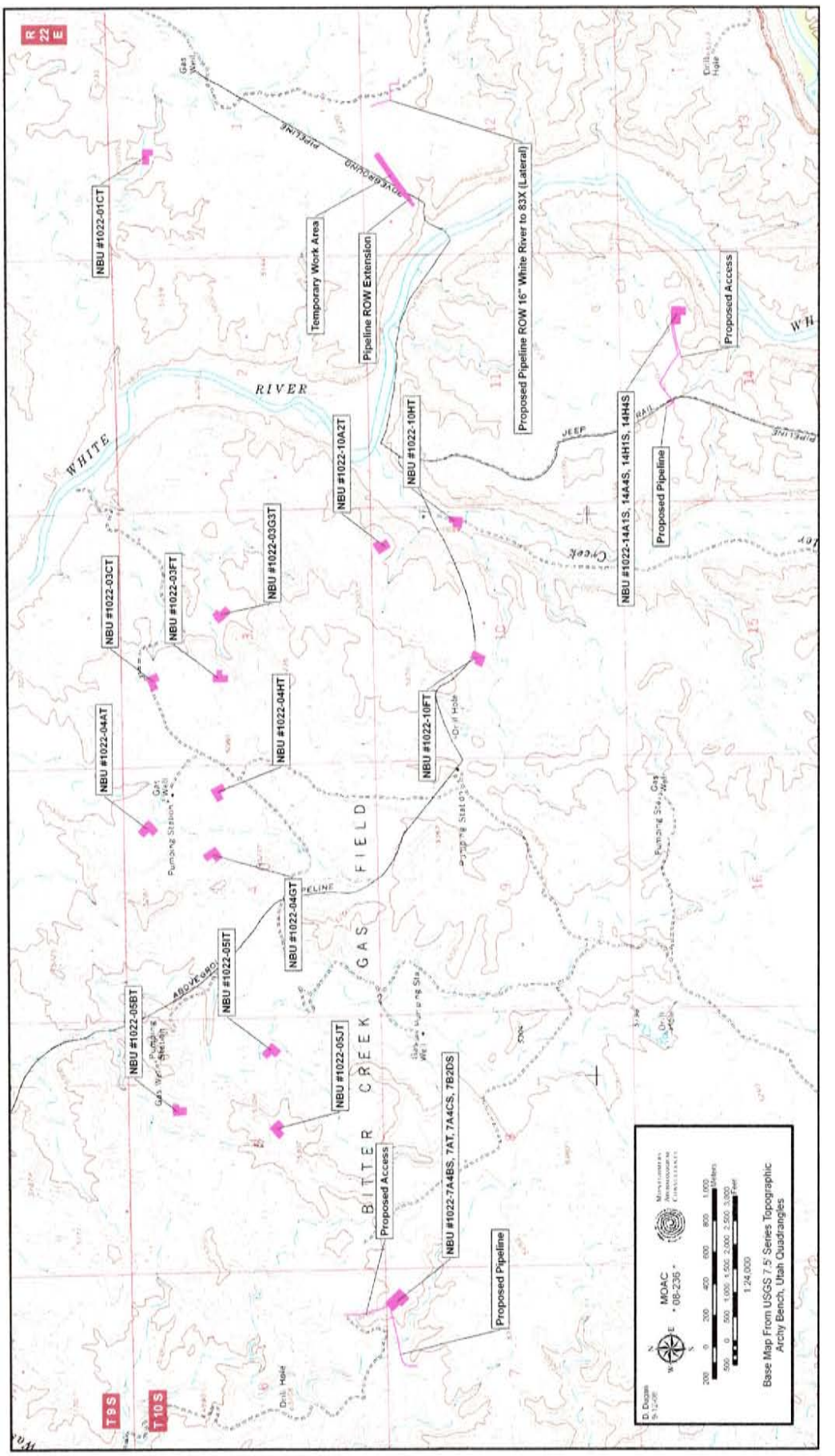
The project area in which Kerr-McGee Onshore's proposed NBU well locations and pipeline/workstation occur was previously inventoried by MOAC in 2007 for the Class III inventory of Township 10 South, Range 22 East (Montgomery 2008). A file search was completed by consulting MOAC's Class I existing data review of 459 square miles (293,805 acres) covering the Greater NBU study area between Bonanza and Ouray in Uintah County, northeastern Utah (Patterson et al. 2008). Kerr-McGee Oil & Gas Onshore LP proposes to explore and develop oil and natural gas resources throughout the area. Record searches were performed for this Class I project by Marty Thomas at the Utah State Historic Preservation Office (SHPO) on various dates between June 14, 2006 and January 27, 2007. The results of this Class I data review and Class III inventory indicated that no archaeological sites occur in the current project area.

DESCRIPTION OF THE PROJECT AREA

The project area is situated in the Bitter Creek Gas Field along the east and west sides of the White River in the Uinta Basin. The legal description is Township 10S, Range 22E Sections 1, 3, 4, 5, 6, 7, 10, 12 and 14 (Table 1; Figure 1).

Table 1. Kerr-McGee Onshore's 21 NBU Well Locations.

Well Designation	Legal Description	Access/Pipeline Corridor	Cultural Resources
1022-01CT	T10S R22E Sec. 1 NE/NW	None	None
1022-03CT	T10S R22E Sec. 3 NE/NW	None	None
1022-03FT	T10S R22E Sec. 3 SE/NW	None	None
1022-03GT	T10S R22E Sec. 4 SW/NE	None	None
1022-04AT	T10S R22E Sec. 4 NE/NE	None	None
1022-04GT	T10S R22E Sec. 4 SW/NE	None	None
1022-04HT	T10S R22E Sec. 4 SE/NE	None	None
1022-05BT	T10S R22E Sec. 5 NW/NE	None	None
1022-05IT	T10S R22E Sec. 5 NE/SE	None	None
1022-05JT	T10S R22E Sec. 5 NW/SE	None	None
1022-7A4BS, 1022-7AT 1022-7A4CS 1022-7B2DS	T10S R22E Sec. 7 NE/NE	Access 1050 ft Pipeline 1350 ft	None
1022-10A2T	T10S R22E Sec. 10 NE/NE	None	None
1022-10FT	T10S R22E Sec. 10 SE/NW	None	None
1022-10HT	T10S R22E Sec. 10 SE/NE	None	None
1022-14A1S, 1022-14A4S 1022-14H1S, 1022-14H4S	T10S R22E Sec. 14 NW/NE	Access 700 ft Pipeline 1700 ft	None
White Rv. To 83X Lateral PL	T10S R22E Sec. 12	900 ft	None
PL ROW Extension & Work Area	T10S R22E Sec. 12	1300 ft	None



The study area lies within the Uinta Basin physiographic unit, a distinctly bowl-shaped geologic structure (Stokes 1986:231). The Uinta Basin ecosystem is within the Green River drainage, considered to be the northernmost extension of the Colorado Plateau. The geology is comprised of Tertiary age deposits, which include Paleocene age deposits and Eocene age fluvial and lacustrine sedimentary rocks. The Uinta Formation, which is predominate in the project area, occurs as eroded outcrops (formed by fluvial deposited, stream laid interbedded sandstone and mudstone), and is known for its prolific paleontological localities. Specifically, the inventory area is situated adjacent to the White River and Bitter Creek. Elevation ranges from 4800 to 5300 ft asl. The project occurs within the Upper Sonoran Desert Shrub Association which includes; sagebrush, shadscale, greasewood, mat saltbush, snakeweed, rabbitbrush, and prickly pear cactus. Modern disturbances include livestock grazing, roads, and oil/gas development.

CLASS I RESULTS AND RECOMMENDATIONS

The Class I literature review of Kerr-McGee Onshore's proposed NBU well locations in Township 10S, Range 22E resulted in the location of no cultural resources. Based on the findings, a determination of "no adverse impact" is recommended for the undertaking pursuant to Section 106, CFR 800.

REFERENCES CITED

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2008 Cultural Resource Management Report for Kerr-McGee Oil and Gas Onshore LP's Greater NBU Blocks in Township 10 South, Range 22 East, Uintah County, Utah. Montgomery Archaeological Consultants, Moab, Utah. Report No. U-07-MQ-1438.

Patterson, J. J., J. Fritz, K. Lower-Eskelson, R. Stash and A. Thomas
2008 NBU Class I Existing Data Review for Kerr-McGee Oil & Gas Onshore LP, Uintah County, Utah. Montgomery Archaeological Consultants, Moab, Utah.

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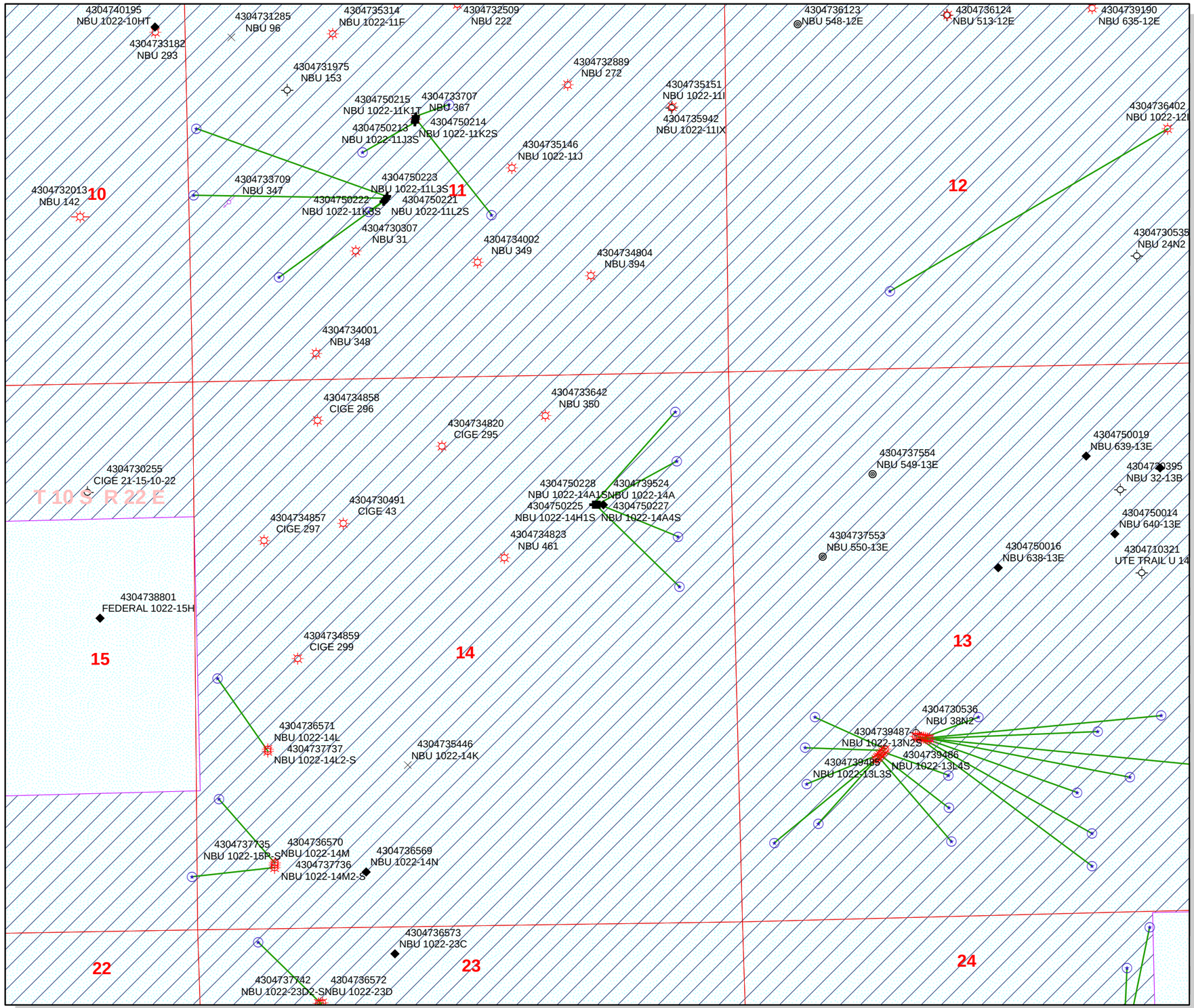


API Number: 4304750227

Well Name: NBU 1022-14A4S

Township 10.0 S Range 22.0 E Section 14

Meridian: SLBM

Operator: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Map Prepared:
Map Produced by Diana Mason

Units

STATUS
- ACTIVE
- EXPLORATORY
- GAS STORAGE
- NF PP OIL
- NF SECONDARY
- PI OIL
- PP GAS
- PP GEOTHERML
- PP OIL
- SECONDARY
- TERMINATED

Fields

STATUS
- ACTIVE
- COMBINED
- Sections
- Township

Wells Query Events
- <all other values>

GIS_STAT_TYPE
- <Null>
- APD
- DRL
- GI
- GS
- LA
- NEW
- OPS
- PA
- PGW
- POW
- RET
- SGW
- SOW
- TA
- TW
- WD
- WI
- WS

1,300 650 0 1,300 Feet

1:12,000

'APIWellNo:43047502270000'

'APIWellNo:43047502270000'

Kerr-McGee Oil & Gas Onshore LP
1999 Broadway, Suite 3700
Denver, CO 80205

November 13, 2008

Mrs. Diana Mason
Division of Oil, Gas and Mining
P.O. Box 145801
Salt Lake City, UT 84114-6100

1175

Re: Directional Drilling R649-3-11
NBU 1022-14A4S
T10S R22E
Section 14: NENE
1230' FNL, 1377' FEL (surface)
825' FNL, 600' FEL (bottom hole)
Uintah County, Utah

Dear Mrs. Mason:

Pursuant to the filing of Kerr-McGee Oil & Gas Onshore LP's (Kerr-McGee) Application for Permit to Drill regarding the above referenced well, we are hereby submitting this letter in accordance with Oil & Gas Conservation Rule R649-3-11 pertaining to the Exception to Location and Siting of Wells.

- Kerr-McGee's NBU 1022-14A4S is located within the Natural Buttes Unit area.
- Kerr-McGee is permitting this well as a directional well in order to minimize surface disturbance. Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to utilize the existing road and pipelines in the area.
- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire directional well bore

Therefore, based on the above stated information Kerr-McGee Oil & Gas Onshore LP requests the permit be granted pursuant to R649-3-11.

Sincerely,

KERR-MCGEE OIL & GAS ONSHORE LP

Jason K. Rayburn
Landman

RECEIVED
NOV 18 2008
DIV. OF OIL, GAS & MINING

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office
P.O. Box 45155
Salt Lake City, Utah 84145-0155

IN REPLY REFER TO:
3160
(UT-922)

November 21, 2008

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2008 Plan of Development Natural Buttes Unit
Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2008 within the Natural Buttes Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
43-047-50224	NBU 1022-14H4S	Sec 14 T10S R22E 1229 FNL 1397 FEL BHL Sec 14 T10S R22E 2045 FNL 0600 FEL
43-047-50225	NBU 1022-14H1S	Sec 14 T10S R22E 1231 FNL 1357 FEL BHL Sec 14 T10S R22E 1560 FNL 0600 FEL
43-047-50227	NBU 1022-14A4S	Sec 14 T10S R22E 1230 FNL 1377 FEL BHL Sec 14 T10S R22E 0825 FNL 0600 FEL
43-047-50228	NBU 1022-14A1S	Sec 14 T10S R22E 1228 FNL 1417 FEL BHL Sec 14 T10S R22E 0345 FNL 0600 FEL
43-047-50226	NBU 922-31CT	Sec 31 T09S R22E 0389 FNL 1592 FWL

This office has no objection to permitting the wells at this time.

/s/ Michael L. Coulthard

API Well No: 43047502270000

bcc: File - Natural Buttes Unit
Division of Oil Gas and Mining
Central Files
Agr. Sec. Chron
Fluid Chron

MCoulthard:mc:11-21-08

BOPE REVIEW KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 1022-14A4S 43047502270000

Well Name	KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 1022-14A4S 4304750227			
String	Surf	Prod		
Casing Size(")	9.625	4.500		
Setting Depth (TVD)	1900	8400		
Previous Shoe Setting Depth (TVD)	0	1900		
Max Mud Weight (ppg)	8.4	12.0		
BOPE Proposed (psi)	0	5000		
Casing Internal Yield (psi)	3520	7780		
Operators Max Anticipated Pressure (psi)	5208	11.9		

Calculations	Surf String	9.625	"
Max BPH (psi)	.052*Setting Depth*MW=	830	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	602	NO
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	412	NO
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	412	NO Reasonable depth in area, no expected pressures
Required Casing/BOPE Test Pressure=		1900	psi
*Max Pressure Allowed @ Previous Casing Shoe=		0	psi *Assumes 1psi/ft frac gradient

Calculations	Prod String	4.500	"
Max BPH (psi)	.052*Setting Depth*MW=	5242	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	4234	YES
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	3394	YES OK
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	3812	NO Reasonable, note max pressure allowed
Required Casing/BOPE Test Pressure=		5000	psi
*Max Pressure Allowed @ Previous Casing Shoe=		1900	psi *Assumes 1psi/ft frac gradient

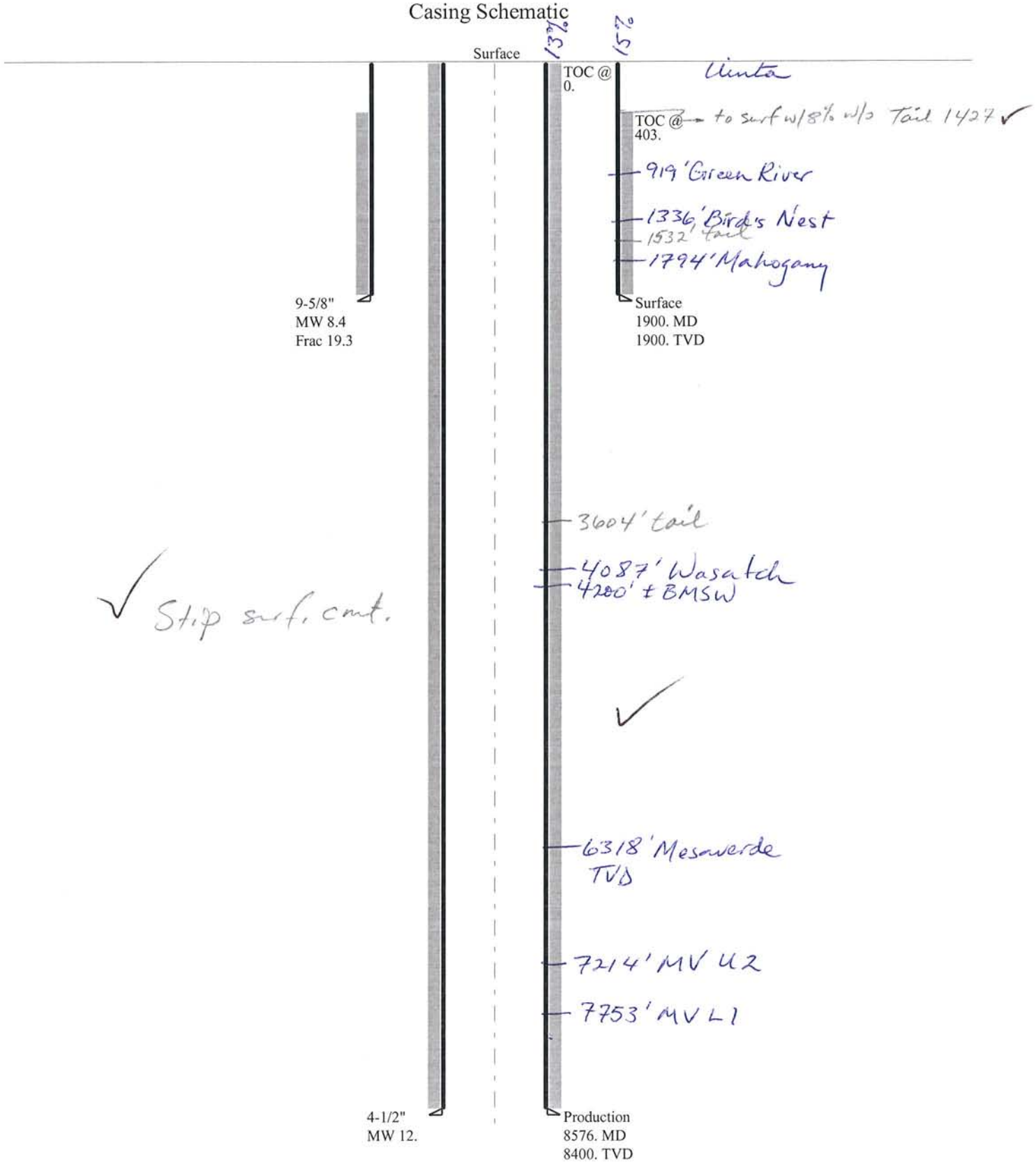
Calculations	String		"
Max BPH (psi)	.052*Setting Depth*MW=		
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=		NO
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=		NO
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=		NO
Required Casing/BOPE Test Pressure=			psi
*Max Pressure Allowed @ Previous Casing Shoe=			psi *Assumes 1psi/ft frac gradient

Calculations	String		"
Max BPH (psi)	.052*Setting Depth*MW=		
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=		NO
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=		NO
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=		NO
Required Casing/BOPE Test Pressure=			psi
*Max Pressure Allowed @ Previous Casing Shoe=			psi *Assumes 1psi/ft frac gradient

'APIWellNo:43047502270000'

43047502270000 K-M NBU 1022-14A4S

Casing Schematic



'APIWellNo:43047502270000'

Well name:	**43047502270000 K-M NBU 1022-14A4S**
Operator:	**KERR-MCGEE OIL & GAS ONSHORE, L.P.**
String type:	Surface
Project ID:	43-047-50227-0000
Location:	UINTAH COUNTY

Design parameters:

Collapse
Mud weight: 8.400 ppg
Design is based on evacuated pipe.

Burst
Max anticipated surface pressure: 1,672 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 1,900 psi

No backup mud specified.

Minimum design factors:

Collapse:
Design factor 1.000

Burst:
Design factor 1.00

Tension:
8 Round STC: 1.80 (J)
8 Round LTC: 1.70 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Tension is based on air weight.
Neutral point: 1,664 ft

Environment:
H2S considered? No
Surface temperature: 74 °F
Bottom hole temperature: 101 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 100 ft

Cement top: 403 ft

Non-directional string.

Re subsequent strings:
Next setting depth: 8,576 ft
Next mud weight: 12.000 ppg
Next setting BHP: 5,346 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 1,900 ft
Injection pressure: 1,900 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost ($)
1	1900	9.625	36.00	J-55	LT&C	1900	1900	8.796	15537

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	829	2020	2.436	1900	3520	1.85	68.4	453	6.62 J

Prepared by: Helen Sadik-Macdonald, Div of Oil,Gas & Mining
Phone: 801 538-5357
FAX: 801-359-3940
Date: January 22,2009
Salt Lake City, Utah

Remarks:
Collapse is based on a vertical depth of 1900 ft, a mud weight of 8.4 ppg The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

'APIWellNo:43047502270000'

Well name:	**43047502270000 K-M NBU 1022-14A4S**
Operator:	**KERR-MCGEE OIL & GAS ONSHORE, L.P.**
String type:	Production
Project ID:	43-047-50227-0000
Location:	UINTAH COUNTY

Design parameters:

Collapse
Mud weight: 12.000 ppg
Design is based on evacuated pipe.

Burst
Max anticipated surface pressure: 3,388 psi
Internal gradient: 0.220 psi/ft
Calculated BHP 5,236 psi

No backup mud specified.

Minimum design factors:

Collapse:
Design factor 1.000

Burst:
Design factor 1.00

Tension:
8 Round STC: 1.80 (J)
8 Round LTC: 1.80 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.60 (B)

Tension is based on air weight.
Neutral point: 7,069 ft

Environment:
H2S considered? No
Surface temperature: 74 °F
Bottom hole temperature: 192 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 100 ft

Cement top: Surface

Directional Info - Build & Drop
Kick-off point 2100 ft
Departure at shoe: 864 ft
Maximum dogleg: 3 °/100ft
Inclination at shoe: 0 °

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost ($)
1	8576	4.5	11.60	I-80	LT&C	8400	8576	3.875	113203

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	5236	6360	1.215	5236	7780	1.49	97.4	212	2.18 J

Prepared by: Helen Sadik-Macdonald
Div of Oil,Gas & Mining
Phone: 801 538-5357
FAX: 801-359-3940
Date: January 22,2009
Salt Lake City, Utah

Remarks:
Collapse is based on a vertical depth of 8400 ft, a mud weight of 12 ppg The casing is considered to be evacuated for collapse purposes.
Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.
Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

Engineering responsibility for use of this design will be that of the purchaser.

From: Jim Davis
To: Bonner, Ed; Mason, Diana
Date: 3/16/2009 11:00 AM
Subject: Kerr McGee approvals (7)

CC: Garrison, LaVonne

The following wells have been approved by SITLA including arch and paleo clearance.

NBU 1022-14A1S 43-047-50228
NBU 1022-14A4S 43-047-50227
NBU 1022-14H1S 43-047-50225
NBU 1022-14H4S 43-047-50224
NBU 1022-11F4S 43-047-50212
NBU 1022-11K2S 43-047-50214
NBU 1022-11J3S 43-047-50213

-Jim Davis

Jim Davis
Utah Trust Lands Administration
jimdavis1@utah.gov
Phone: (801) 538-5156

ON-SITE PREDRILL EVALUATION
Utah Division of Oil, Gas and Mining

Operator	KERR-MCGEE OIL & GAS ONSHORE, L.P.				
Well Name	NBU 1022-14A4S				
API Number	43047502270000	**APD No**	1175	**Field/Unit**	NATURAL BUTTES
Location: 1/4,1/4	NWNE **Sec** 14 **Tw** 10.0S **Rng** 22.0E 1230 FNL 1377 FEL				
GPS Coord (UTM)	636512 4423543	**Surface Owner**			

Participants

Floyd Bartlett (DOGM), Jim Davis (SITLA), Ramie Hoopes, Griz Oleen and Tony Kzneck (Kerr McGee), Pat Rainbolt (UDWR) and David Kay (Uintah Engineering and Land Surveying).

Regional/Local Setting & Topography

The general area is near the end of Archy Bench located between the White River to the east and Bitter Creek to the west. A few rounded to flat-topped ridges or benches occur. The area contains numerous side draws with side-slopes that become excessively steep often forming vertical cliffs as they break off into these major drainages. Access is by existing roads except for 0.15 miles of new road which will be required.. Ouray Utah is approximately 29 road miles to the northwest.

Four wells will be directionally drilled from this pad. The pad is oriented in an east-west direction with the south portion beginning on a flat-topped ridge which extends away from a higher knoll capped with sandstone bedrock. This ridge also extends to the northeast toward the White River rim with the river being approximately 1/5 mile from the location. The ridge with the location also slopes off moderately steep to the north toward a deep side-draw. The heads of the draws and swales within the site on the north will be filled during construction. No drainages intersect the location and no diversions are needed. No seeps, springs or streams exist in the immediate area. The selected site appears to be a good location for constructing a pad and drilling and operating the proposed wells and because of rough topography, the only location available in the area.

A reserve pit 100'x 250'x 10' deep is planned in an area of cut in the south east corner of the location. Because the length of time the reserve pit will be used and the roughness of the terrain, Kerr McGee committed to line it with a double 20-mil.liner and an appropriate thickness of felt sub-liner to cushion the rock. A second pit for completion flows is shown on the Layout Sheet. If it is to be constructed it will be applied for separately.

The surface and minerals are both owned by SITLA.

Surface Use Plan

Current Surface Use
Existing Well Pad
Grazing
Recreational
Wildlfe Habitat

New Road Miles	Well Pad	Src Const Material	Surface Formation
0.15	**Width** 315 **Length** 370	Onsite	UNTA

Ancillary Facilities N

Waste Management Plan Adequate?

Environmental Parameters

Affected Floodplains and/or Wetlands N

Flora / Fauna

A fair vegetation stand including cheatgrass, black sagebrush, broom snakeweed, shadscale, Indian Ricegrass, Gardner saltbrush, globe mallow and annuals exist.

Sheep, deer, antelope, coyote, and other small mammals and birds.

Soil Type and Characteristics

Shallow gravely, rocky sandy loam.

Erosion Issues N

Sedimentation Issues N

Site Stability Issues N

Drainage Diverson Required? N

Berm Required? N

Erosion Sedimentation Control Required? N

Paleo Survey Run? **Paleo Potental Observed?** N **Cultural Survey Run?** **Cultural Resources?** N

Reserve Pit

Site-Specific Factors		Site Ranking	
Distance to Groundwater (feet)	>200	0	
Distance to Surface Water (feet)	>1000	0	
Dist. Nearest Municipal Well (ft)	>5280	0	
Distance to Other Wells (feet)		20	
Native Soil Type	Mod permeability	10	
Fluid Type	Fresh Water	5	
Drill Cuttings	Normal Rock	0	
Annual Precipitation (inches)		0	
Affected Populations			
Presence Nearby Utility Conduits	Not Present	0	
	Final Score	35	1 Sensitivity Level

Characteristics / Requirements

A reserve pit 100'x 250'x 10' deep is planned in an area of cut in the south east corner of the location. Because the length of time the reserve pit will be used and the roughness of the terrain, Kerr McGee committed to line it with a double 20-mil.liner and an appropriate thickness of felt sub-liner to cushion the rock. A second pit for completion flows is shown on the Layout Sheet. If it is to be constructed it will be applied for separately.

Closed Loop Mud Required? N **Liner Required?** Y **Liner Thickness** 40 **Pit Underlayment Required?** Y

Other Observations / Comments

Floyd Bartlett	11/18/2008
Evaluator	**Date / Time**

Application for Permit to Drill
Statement of Basis

APD No	API WellNo	Status	Well Type	Surf Owner	CBM
1175	43047502270000	FILED	GW	S	No
Operator	KERR-MCGEE OIL & GAS ONSHORE, L.P.		**Surface Owner-APD**		
Well Name	NBU 1022-14A4S		**Unit**	NATURAL BUTTES	
Field	NATURAL BUTTES		**Type of Work**	DRILL	
Location	NWNE 14 10S 22E S 1230 FNL 1377 FEL		GPS Coord (UTM)	636508E	4423532N

Geologic Statement of Basis

Kerr McGee proposes to set 1,900' of surface casing at this location. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 4,200'. A search of Division of Water Rights records shows no water wells within a 10,000 foot radius of the center of Section 14. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. Production casing cement should be brought to above the base of the moderately saline groundwater in order to isolate it from fresher waters uphole.

Brad Hill	12/2/2008
APD Evaluator	**Date / Time**

Surface Statement of Basis

The general area is near the end of Archy Bench located between the White River to the east and Bitter Creek to the west. A few rounded to flat-topped ridges or benches occur. The area contains numerous side draws with side-slopes that become excessively steep often forming vertical cliffs as they break off into these major drainages. Access is by existing roads except for 0.15 miles of new road which will be required.. Ouray Utah is approximately 29 road miles to the northwest.

Four wells will be directionally drilled from this pad. The pad is oriented in an east-west direction with the south portion beginning on a flat-topped ridge which extends away from a higher knoll capped with sandstone bedrock. This ridge also extends to the northeast toward the White River rim with the river being approximately 1/5 mile from the location. The ridge with the location also slopes off moderately steep to the north toward a deep side-draw. The heads of the draws and swales within the site on the north will be filled during construction. No drainages intersect the location and no diversions are needed. No seeps, springs or streams exist in the immediate area. The selected site appears to be a good location for constructing a pad and drilling and operating the proposed wells and because of rough topography, the only location available in the area.

A reserve pit 100'x 250'x 10' deep is planned in an area of cut in the south east corner of the location. Because the length of time the reserve pit will be used and the roughness of the terrain, Kerr McGee committed to line it with a double 20-mil.liner and an appropriate thickness of felt sub-liner to cushion the rock. A second pit for completion flows is shown on the Layout Sheet. If it is to be constructed it will be applied for separately.

The surface and minerals are both owned by SITLA. Jim Davis of SITLA attended the pre-site and had no concerns regarding the proposed location.

Pat Rainbolt representing the Utah Division of Wildlife Resources stated that a historic prairie falcon nest is located along the White River Rim approximately ½ mile to the north of the proposed pad. He recommended to Jim Davis of SITLA that the pad not be constructed or the wells drilled during the nesting and fledging period which is April 1-July 15th. Mr. Davis told Ramie Hoopes that if Kerr-McGee could not schedule around this period SITLA was to be contacted. No other wildlife values are expected to be significantly affected. Mr. Rainbolt provided Jim Davis and Ramie Hoopes a written wildlife evaluation and a copy of a recommended

seed mix to be used for re-vegetating the disturbed area.

Floyd Bartlett	11/18/2008
Onsite Evaluator	**Date / Time**

Conditions of Approval / Application for Permit to Drill

Category	Condition
Pits	A double synthetic liner each with a minimum thickness of 20 mils and an appropriate thickness of felt sub-liner to cushion the liners shall be properly installed and maintained in the reserve pit.
Surface	The reserve pit shall be fenced upon completion of drilling operations.

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 11/17/2008 **API NO. ASSIGNED:** 43047502270000

WELL NAME: NBU 1022-14A4S

OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995) **PHONE NUMBER:** 720 929-6226

CONTACT: Kevin McIntyre

PROPOSED LOCATION: NWNE 14 100S 220E **Permit Tech Review:** ☑

SURFACE: 1230 FNL 1377 FEL **Engineering Review:** ☑

BOTTOM: 0825 FNL 0600 FEL **Geology Review:** ☑

COUNTY: UINTAH

LATITUDE: 39.95281 **LONGITUDE:** -109.40197

UTM SURF EASTINGS: 636508.00 **NORTHINGS:** 4423532.00

FIELD NAME: NATURAL BUTTES

LEASE TYPE: 3 - State

LEASE NUMBER: ST UO 01197A **PROPOSED FORMATION:** WSMVD

SURFACE OWNER: 3 - State **COALBED METHANE:** NO

RECEIVED AND/OR REVIEWED:

- ☑ **PLAT**
- ☑ **Bond:** STATE/FEE - 22013542
- ☐ **Potash**
- ☐ **Oil Shale 190-5**
- ☐ **Oil Shale 190-3**
- ☐ **Oil Shale 190-13**
- ☑ **Water Permit:** Permit #43-8496
- ☐ **RDCC Review:**
- ☐ **Fee Surface Agreement**
- ☐ **Intent to Commingle**

LOCATION AND SITING:

- ☐ **R649-2-3.**

  Unit: NATURAL BUTTES
- ☐ **R649-3-2. General**
- ☐ **R649-3-3. Exception**
- ☑ **Drilling Unit**

  Board Cause No: Cause 173-14

  Effective Date: 12/2/1999

  Siting: 460' fr u bdry & uncomm. tract
- ☐ **R649-3-11. Directional Drill**

Comments: Presite Completed

Stipulations: 3 - Commingling - ddoucet
5 - Statement of Basis - bhill
25 - Surface Casing - ddoucet

JON M. HUNTSMAN, JR.
Governor
GARY R. HERBERT
Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES
MICHAEL R. STYLER
Executive Director
Division of Oil, Gas and Mining
JOHN R. BAZA
Division Director

Permit To Drill

****

Well Name: NBU 1022-14A4S
API Well Number: 43047502270000
Lease Number: ST UO 01197A
Surface Owner: STATE
Approval Date: 3/19/2009

Issued to:
KERR-MCGEE OIL & GAS ONSHORE, L.P. , P.O. Box 173779, Denver, CO 80217

Authority:
Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 173-14 .

Duration:
This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

Commingle:
In accordance with Cause No. 173-14, commingling of the Wasatch and Mesaverde formations is allowed.

General:
Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

Conditions of Approval:
Surface casing shall be cemented to the surface.

Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis (copy attached).

Notification Requirements:
The operator is required to notify the Division of Oil, Gas and Mining of the following action during drilling of this well:

- 24 hours prior to cementing or testing casing - contact Dan Jarvis
- 24 hours prior to testing blowout prevention equipment - contact Dan Jarvis
- 24 hours prior to spudding the well - contact Carol Daniels
- Within 24 hours of any emergency changes made to the approved drilling program - contact

API Well No: 43047502270000

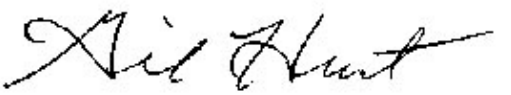
Dustin Doucet
- Prior to commencing operations to plug and abandon the well - contact Dan Jarvis

The operator is required to get approval from the Division of Oil, Gas and Mining before performing any of the following actions during the drilling of this well:
- Plugging and abandonment or significant plug back of this well - contact Dustin Doucet
- Any changes to the approved drilling plan - contact Dustin Doucet

The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voice mail message if the person is not available to take the call):
- Dan Jarvis at: (801) 538-5338 office
  (801) 942-0871 home
- Carol Daniels at: (801) 538-5284 office
- Dustin Doucet at: (801) 538-5281 office
  (801) 733-0983 home

Reporting Requirements:
All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

Approved By:



Gil Hunt
Associate Director, Oil & Gas

API Well No: 43047502270000

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5.LEASE DESIGNATION AND SERIAL NUMBER: ST UO 01197A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 1022-14A4S

2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER: 43047502270000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER: 720 929-6007 Ext

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1230 FNL 1377 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNE Section: 14 Township: 10.0S Range: 22.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
✓ SPUD REPORT Date of Spud: 8/17/2009	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

MIRU PETE MARTIN BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'. RAN 14" 36.7# SCHEDULE 10 PIPE. CMT W/28 SX READY MIX. SPUD WELL LOCATION ON 08/17/2009 AT 15:00 HRS.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
August 18, 2009

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Andy Lytle	720 929-6100	Regulatory Analyst
SIGNATURE N/A		**DATE** 8/18/2009

RECEIVED August 18, 2009

API Well No: 43047502270000

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: ST UO 01197A

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 1022-14A4S

2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER: 43047502270000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER: 720 929-6007 Ext

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1230 FNL 1377 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNE Section: 14 Township: 10.0S Range: 22.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ SPUD REPORT Date of Spud:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
✓ DRILLING REPORT Report Date: 8/29/2009	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

MIRU PROPETRO AIR RIG ON 08/27/2009. DRILLED 12-1/4" SURFACE HOLE TO 1980'. RAN 9-5/8" 36# J-55 SURFACE CSG. CMT TAIL W/250 SX CLASS G PREM LITE @ 15.8 PPG, 1.15 YIELD. FLOAT OK. TOP OUT W/450 SX CLASS G PREM LITE @ 15.8, 1.15 YIELD. WORT.

Accepted by the Utah Division of Oil, Gas and Mining

FOR RECORD ONLY

September 01, 2009

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Andy Lytle	720 929-6100	Regulatory Analyst
SIGNATURE N/A		**DATE** 8/31/2009

RECEIVED August 31, 2009

API Well No: 43047502270000

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5.LEASE DESIGNATION AND SERIAL NUMBER: ST UO 01197A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL: Gas Well

8. WELL NAME and NUMBER: NBU 1022-14A4S

2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER: 43047502270000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER: 720 929-6007 Ext

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1230 FNL 1377 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNE Section: 14 Township: 10.0S Range: 22.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
✓ DRILLING REPORT Report Date: 10/28/2009	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

FINISHED DRILLING FROM 1980' TO 8615' ON 10/26/2009. RAN 4-1/2" 11.6# I-80 PRODUCTION CSG. TEST LINES 4000 PSI. PUMP 40 BBLS WATER AHEAD. LEAD CMT W/555 SX ECONOCEM @ 12.5 PPG, 1.97 YIELD. TAILED CMT W/1350 SX CLASS G 50/50 POZ MIX @ 14.3 PPG, 1.25 YIELD. DROP PLUG & DISPLACED W/133 BBLS WATER, BUMP W/500 OVER FINAL CIRC PSI OF 2530, PLUG HELD, GOT BACK 1.5 BBLS CEMENT TO SURFACE, FULL RETURNS DURING JOB. RELEASE ENSIGN 139 RIG ON 10/28/2009 AT 10:00 HRS.

Accepted by the Utah Division of Oil, Gas and Mining

FOR RECORD ONLY

November 02, 2009

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Andy Lytle	720 929-6100	Regulatory Analyst
SIGNATURE N/A		**DATE** 10/30/2009

RECEIVED October 30, 2009

API Well No: 43047502270000

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

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5.LEASE DESIGNATION AND SERIAL NUMBER: ST UO 01197A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 1022-14A4S

2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER: 43047502270000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER: 720 929-6007 Ext

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1230 FNL 1377 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNE Section: 14 Township: 10.0S Range: 22.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
✓ NOTICE OF INTENT Approximate date work will start: 7/19/2010	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
☐ SPUD REPORT Date of Spud:	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	✓ OTHER	OTHER: UPDATE WATER SOUI

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Kerr-McGee Oil & Gas Onshore, LP respectfully requests to update the water source for this location to Permit Numbers 49-2306 and 49-2319, both obtained by R.N. Industries. Please contact the undersigned for with any questions.

Accepted by the Utah Division of Oil, Gas and Mining

Date: July 22, 2010

By: Dustin Doucet

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Andy Lytle	720 929-6100	Regulatory Analyst
SIGNATURE		**DATE**
N/A		7/19/2010

API Well No: 43047502270000

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5.LEASE DESIGNATION AND SERIAL NUMBER: ST UO 01197A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 1022-14A4S

2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER: 43047502270000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779 **PHONE NUMBER:** 720 929-6007 Ext

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1230 FNL 1377 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNE Section: 14 Township: 10.0S Range: 22.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
✓ DRILLING REPORT Report Date: 8/10/2010	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	✓ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

THE SUBJECT WELL WAS PLACED ON PRODUCTION ON AUGUST 10, 2010 AT 12:20 P.M. THE CHRONOLOGICAL WELL HISTORY WILL BE SUBMITTED WITH THE WELL COMPLETION REPORT.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
August 11, 2010

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Andy Lytle	720 929-6100	Regulatory Analyst
SIGNATURE N/A		**DATE** 8/10/2010

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

AMENDED REPORT ☐ (highlight changes) FORM 8

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. LEASE DESIGNATION AND SERIAL NUMBER: ST UO 01197A
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
7. UNIT or CA AGREEMENT NAME: UTU63047A
8. WELL NAME and NUMBER: NBU 1022-14A4S
9. API NUMBER: 4304750227
10. FIELD AND POOL, OR WILDCAT: NATURAL BUTTES

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☑ DRY ☐ OTHER

b. TYPE OF WORK: NEW WELL ☑ HORIZ. LATS. ☐ DEEP-EN ☐ RE-ENTRY ☐ DIFF. RESVR. ☐ OTHER

2. NAME OF OPERATOR: KERR MCGEE OIL & GAS ONSHORE, L.P.

3. ADDRESS OF OPERATOR: P.O.BOX 173779 CITY DENVER STATE CO ZIP 80217 PHONE NUMBER: (720) 929-6100

4. LOCATION OF WELL (FOOTAGES)
AT SURFACE: NWNE 1230 FNL 1377 FEL S14,T10S,R22E
AT TOP PRODUCING INTERVAL REPORTED BELOW: NENE 816 FNL 624 FEL S14, T10S, R22E
AT TOTAL DEPTH: NENE 812 FNL 610 FEL S14, T10S, R22E

11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NWNE 14 10S 22E
12. COUNTY: UINTAH
13. STATE: UTAH

14. DATE SPUDDED: 8/17/2009
15. DATE T.D. REACHED: 10/26/2009
16. DATE COMPLETED: 8/10/2010 ABANDONED ☐ READY TO PRODUCE ☑
17. ELEVATIONS (DF, RKB, RT, GL): 5234 GL

18. TOTAL DEPTH: MD 8,615 TVD 8,487
19. PLUG BACK T.D.: MD 8,537 TVD 8,407
20. IF MULTIPLE COMPLETIONS, HOW MANY? *
21. DEPTH BRIDGE PLUG SET: MD TVD

22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each)
GR/CBL-BHV/SD/DSN/ACTR

23.
WAS WELL CORED? NO ☑ YES ☐ (Submit analysis)
WAS DST RUN? NO ☑ YES ☐ (Submit report)
DIRECTIONAL SURVEY? NO ☐ YES ☑ (Submit copy)

24. CASING AND LINER RECORD (Report all strings set in well)

HOLE SIZE	SIZE/GRADE	WEIGHT (#/ft.)	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP **	AMOUNT PULLED
20"	14" STL	36.7#		40		28			
12 1/4"	9 5/8" J-55	36#		1,908		700			
7 7/8"	4 1/2" I-80	11.6#		8,580		1,905			

25. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 3/8"	7,959							

26. PRODUCING INTERVALS

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)
(A) MESAVERDE	6,729	8,494		
(B)				
(C)				
(D)				

27. PERFORATION RECORD

INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS
6,729 8,494	0.36	198	Open ☑ Squeezed ☐
			Open ☐ Squeezed ☐
			Open ☐ Squeezed ☐
			Open ☐ Squeezed ☐

28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL
6729 - 8494	PUMP 8,090 BBLS SLICK H2O & 315,573 LBS 30/50 SAND

RECEIVED
SEP 09 2010
DIV. OF OIL, GAS & MINING

29. ENCLOSED ATTACHMENTS:

☐ ELECTRICAL/MECHANICAL LOGS ☐ GEOLOGIC REPORT ☐ DST REPORT ☑ DIRECTIONAL SURVEY
☐ SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION ☐ CORE ANALYSIS ☐ OTHER:

30. WELL STATUS: PROD

(5/2000)

(CONTINUED ON BACK)

31. INITIAL PRODUCTION — **INTERVAL A (As shown in item #26)**

DATE FIRST PRODUCED:	TEST DATE:	HOURS TESTED:	TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
8/10/2010	8/12/2010	24		0	2,048	720	FLOWING

CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:
20/64	1,400	2,675					0	2,048	720	PROD

INTERVAL B (As shown in item #26)

DATE FIRST PRODUCED:	TEST DATE:	HOURS TESTED:	TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:

CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

INTERVAL C (As shown in item #26)

DATE FIRST PRODUCED:	TEST DATE:	HOURS TESTED:	TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:

CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

INTERVAL D (As shown in item #26)

DATE FIRST PRODUCED:	TEST DATE:	HOURS TESTED:	TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:

CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

32. DISPOSITION OF GAS (Sold, Used for Fuel, Vented, Etc.)

33. SUMMARY OF POROUS ZONES (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

34. FORMATION (Log) MARKERS:

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
GREEN RIVER	914				
BIRD'S NEST	1,215				
MAHOGANY	1,767				
WASATCH	4,185				
MESAVERDE	6,478	8,615	TD		

35. ADDITIONAL REMARKS (Include plugging procedure)

ATTACHED IS THE CHRONOLOGICAL WELL HISTORY AND FINAL SURVEY.

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records.

NAME (PLEASE PRINT) ANDREW LYTLE TITLE REGULATORY ANALYST

SIGNATURE DATE 9/3/2010

This report must be submitted within 30 days of

- completing or plugging a new well
- drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

* ITEM 20: Show the number of completions if production is measured separately from two or more formations.

** ITEM 24: Cement Top – Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to: Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

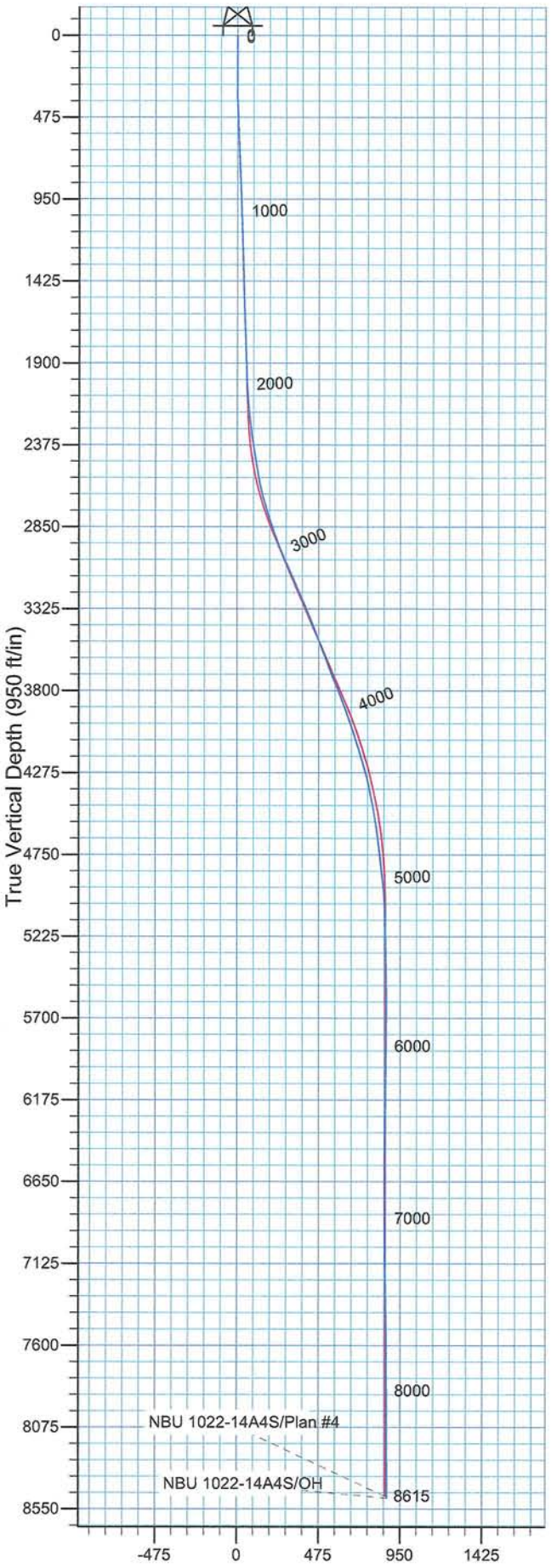
Fax: 801-359-3940

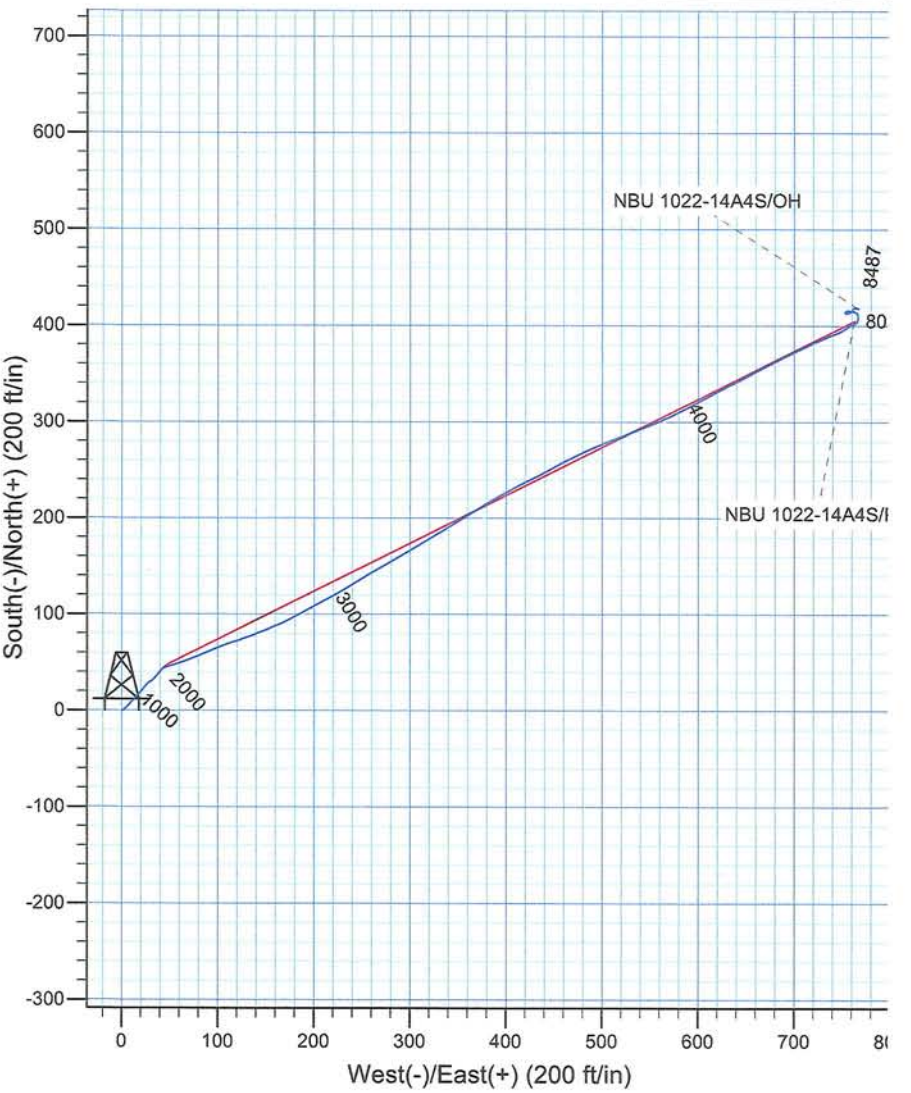
(5/2000)

Scientific Drilling
Rocky Mountain Operations

Project: Uintah County, UT NAD27
Site: NBU 1022-14B Pad
Well: NBU 1022-14A4S
Wellbore: OH
Design: OH

Kerr McGee Oil and Gas Onshore LP





WELL DETAILS: NBU 1022-14A4S

Ground Level: GL 5234' & RKB 14' @ 5248.00ft (Ensign 139)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	596778.07	2588115.02	39° 57' 10.347 N	109° 24' 6.867 W

REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well NBU 1022-14A4S, True North
Vertical (TVD) Reference: GL 5234' & RKB 14' @ 5248.00ft (Ensign 139
Section (VS) Reference: Slot - (0.00N, 0.00E)
Measured Depth Reference: GL 5234' & RKB 14' @ 5248.00ft (Ensign 139
Calculation Method: Minimum Curvature
Local North: True
Location: Sec 14 T10S R22E

PROJECT DETAILS: Uintah County, UT NAD27

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Utah Central 4302

Design: OH (NBU 1022-14A4S/OH)

Created By: Rex Hall Date: 2009-10-27

Kerr McGee Oil and Gas Onshore LP

Uintah County, UT NAD27
NBU 1022-14B Pad
NBU 1022-14A4S
OH

Design: OH

Standard Survey Report

27 October, 2009

Scientific Drilling International

Survey Report

Company:	Kerr McGee Oil and Gas Onshore LP	**Local Co-ordinate Reference:**	Well NBU 1022-14A4S
Project:	Uintah County, UT NAD27	**TVD Reference:**	GL 5234' & RKB 14' @ 5248.00ft (Ensign 139)
Site:	NBU 1022-14B Pad	**MD Reference:**	GL 5234' & RKB 14' @ 5248.00ft (Ensign 139)
Well:	NBU 1022-14A4S	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 2003.16 Multi-User Db

Project	Uintah County, UT NAD27		
Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Utah Central 4302		

Site	NBU 1022-14B Pad, Sec 14 T10S R22E				
Site Position:		**Northing:**	596,779.27 ft	**Latitude:**	39° 57' 10.368 N
From:	Lat/Long	**Easting:**	2,588,074.96 ft	**Longitude:**	109° 24' 7.381 W
Position Uncertainty:	0.00 ft	**Slot Radius:**	in	**Grid Convergence:**	1.34 °

Well	NBU 1022-14A4S, 1230' FNL 1377' FEL					
Well Position	**+N/-S**	0.00 ft	**Northing:**	596,778.07 ft	**Latitude:**	39° 57' 10.347 N
	+E/-W	0.00 ft	**Easting:**	2,588,115.02 ft	**Longitude:**	109° 24' 6.867 W
Position Uncertainty		0.00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	5,234.00 ft

Wellbore	OH				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2005-10	10/21/2008	11.35	65.92	52,603

Design	OH					
Audit Notes:						
Version:	1.0	**Phase:**	ACTUAL	**Tie On Depth:**	10.00	
Vertical Section:	**Depth From (TVD) (ft)**	**+N/-S (ft)**	**+E/-W (ft)**	**Direction (°)**		
	10.00	0.00	0.00	62.04		

Survey Program **Date** 10/27/2009

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
169.00	1,939.00	Survey #1 (OH)	MWD SDI	MWD - Standard ver 1.0.1
1,980.00	8,615.00	Survey #2 - Production (OH)	MWD SDI	MWD - Standard ver 1.0.1

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
10.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00
169.00	0.17	132.03	169.00	-0.16	0.18	0.08	0.11	0.11	0.00
First SDI MWD Surface Survey									
259.00	0.27	133.89	259.00	-0.40	0.43	0.19	0.11	0.11	2.07
349.00	1.53	65.04	348.99	-0.04	1.67	1.46	1.62	1.40	-76.50
429.00	2.30	46.81	428.94	1.51	3.81	4.07	1.22	0.96	-22.79
519.00	2.42	39.98	518.87	4.20	6.35	7.58	0.34	0.13	-7.59
609.00	2.53	44.17	608.78	7.08	8.95	11.23	0.24	0.12	4.66
699.00	2.44	39.67	698.70	9.98	11.56	14.89	0.24	-0.10	-5.00
789.00	2.34	44.46	788.62	12.77	14.07	18.41	0.25	-0.11	5.32
879.00	2.33	43.71	878.55	15.40	16.62	21.90	0.04	-0.01	-0.83
969.00	2.22	42.79	968.47	18.00	19.07	25.28	0.13	-0.12	-1.02

Scientific Drilling International

Survey Report

Company:	Kerr McGee Oil and Gas Onshore LP	**Local Co-ordinate Reference:**	Well NBU 1022-14A4S
Project:	Uintah County, UT NAD27	**TVD Reference:**	GL 5234' & RKB 14' @ 5248.00ft (Ensign 139)
Site:	NBU 1022-14B Pad	**MD Reference:**	GL 5234' & RKB 14' @ 5248.00ft (Ensign 139)
Well:	NBU 1022-14A4S	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 2003.16 Multi-User Db

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
1,059.00	2.20	39.08	1,058.41	20.62	21.34	28.52	0.16	-0.02	-4.12
1,149.00	2.13	40.29	1,148.34	23.24	23.51	31.66	0.09	-0.08	1.34
1,239.00	1.96	37.88	1,238.29	25.73	25.54	34.62	0.21	-0.19	-2.68
1,329.00	1.58	45.91	1,328.24	27.81	27.37	37.22	0.50	-0.42	8.92
1,419.00	1.42	53.04	1,418.21	29.34	29.16	39.51	0.27	-0.18	7.92
1,509.00	1.32	70.77	1,508.19	30.36	31.03	41.64	0.48	-0.11	19.70
1,599.00	1.64	40.07	1,598.16	31.68	32.83	43.86	0.94	0.36	-34.11
1,689.00	2.44	38.55	1,688.10	34.17	34.86	46.81	0.89	0.89	-1.69
1,779.00	2.41	43.77	1,778.02	37.03	37.36	50.36	0.25	-0.03	5.80
1,869.00	2.07	39.20	1,867.95	39.66	39.70	53.66	0.43	-0.38	-5.08
1,939.00	1.94	46.08	1,937.91	41.46	41.35	55.96	0.39	-0.19	9.83
Last SDI MWD Surface Survey									
1,980.00	1.92	41.63	1,978.88	42.45	42.30	57.27	0.37	-0.05	-10.85
First SDI Production MWD Survey									
2,070.00	3.02	65.06	2,068.80	44.58	45.46	61.05	1.64	1.22	26.03
2,161.00	6.01	75.18	2,159.51	46.81	52.24	68.09	3.39	3.29	11.12
2,251.00	6.86	71.16	2,248.94	49.75	61.88	77.98	1.07	0.94	-4.47
2,342.00	8.64	68.65	2,339.11	54.00	73.39	90.14	1.99	1.96	-2.76
2,432.00	8.98	67.99	2,428.05	59.09	86.20	103.84	0.39	0.38	-0.73
2,522.00	9.51	64.05	2,516.88	64.97	99.40	118.26	0.92	0.59	-4.38
2,613.00	12.50	73.63	2,606.20	71.04	115.61	135.42	3.84	3.29	10.53
2,704.00	14.88	68.80	2,694.61	78.04	135.95	156.68	2.90	2.62	-5.31
2,794.00	17.50	67.50	2,781.04	87.40	159.23	181.63	2.94	2.91	-1.44
2,885.00	19.21	61.32	2,867.41	99.83	185.01	210.22	2.84	1.88	-6.79
2,975.00	21.63	61.76	2,951.75	114.78	212.62	241.62	2.69	2.69	0.49
3,066.00	24.18	57.79	3,035.57	132.66	243.17	276.99	3.28	2.80	-4.36
3,156.00	24.53	60.60	3,117.57	151.65	275.04	314.04	1.34	0.39	3.12
3,247.00	23.77	59.38	3,200.60	170.27	307.29	351.25	1.00	-0.84	-1.34
3,338.00	23.15	58.44	3,284.08	188.97	338.31	387.42	0.80	-0.68	-1.03
3,428.00	21.45	57.73	3,367.35	207.02	367.30	421.49	1.91	-1.89	-0.79
3,519.00	20.83	59.94	3,452.22	224.01	395.37	454.25	1.11	-0.68	2.43
3,609.00	20.87	64.44	3,536.33	238.94	423.69	486.26	1.78	0.04	5.00
3,700.00	21.13	60.20	3,621.30	254.09	452.55	518.85	1.69	0.29	-4.66
3,790.00	20.57	65.82	3,705.41	268.63	481.05	550.85	2.31	-0.62	6.24
3,881.00	23.37	69.08	3,789.80	281.62	512.50	584.72	3.36	3.08	3.58
3,972.00	20.56	68.01	3,874.18	294.05	544.18	618.53	3.12	-3.09	-1.18
4,062.00	19.01	65.16	3,958.87	306.13	572.14	648.89	2.03	-1.72	-3.17
4,153.00	19.16	61.25	4,044.87	319.54	598.68	678.62	1.41	0.16	-4.30
4,243.00	16.98	61.90	4,130.43	332.83	623.23	706.53	2.43	-2.42	0.72
4,334.00	15.91	63.04	4,217.70	344.75	646.07	732.29	1.23	-1.18	1.25
4,424.00	14.15	62.40	4,304.62	355.44	666.81	755.63	1.96	-1.96	-0.71
4,515.00	12.15	62.92	4,393.23	364.95	685.20	776.33	2.20	-2.20	0.57
4,605.00	10.19	65.15	4,481.52	372.61	700.86	793.75	2.23	-2.18	2.48
4,696.00	8.61	62.99	4,571.30	379.08	714.23	808.60	1.78	-1.74	-2.37
4,786.00	7.40	64.60	4,660.42	384.63	725.47	821.13	1.37	-1.34	1.79
4,877.00	6.78	69.10	4,750.72	389.06	735.78	832.31	0.91	-0.68	4.95
4,967.00	6.35	69.33	4,840.13	392.71	745.40	842.52	0.48	-0.48	0.26
5,058.00	5.10	54.20	4,930.68	396.86	753.39	851.52	2.14	-1.37	-16.63
5,148.00	3.63	64.77	5,020.42	400.41	759.21	858.33	1.86	-1.63	11.74
5,239.00	2.16	70.63	5,111.30	402.21	763.44	862.90	1.65	-1.62	6.44
5,329.00	1.74	15.86	5,201.26	404.08	765.41	865.53	2.04	-0.47	-60.86
5,420.00	1.23	24.31	5,292.23	406.30	766.19	867.25	0.61	-0.56	9.29
5,510.00	1.35	353.88	5,382.20	408.24	766.47	868.41	0.76	0.13	-33.81
5,601.00	1.17	349.88	5,473.18	410.22	766.20	869.10	0.22	-0.20	-4.40

Scientific Drilling International

Survey Report

Company:	Kerr McGee Oil and Gas Onshore LP	**Local Co-ordinate Reference:**	Well NBU 1022-14A4S
Project:	Uintah County, UT NAD27	**TVD Reference:**	GL 5234' & RKB 14' @ 5248.00ft (Ensign 139)
Site:	NBU 1022-14B Pad	**MD Reference:**	GL 5234' & RKB 14' @ 5248.00ft (Ensign 139)
Well:	NBU 1022-14A4S	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 2003.16 Multi-User Db

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,691.00	0.64	341.07	5,563.17	411.60	765.87	869.46	0.61	-0.59	-9.79
5,782.00	0.47	341.77	5,654.17	412.43	765.59	869.60	0.19	-0.19	0.77
5,873.00	0.23	11.43	5,745.16	412.97	765.51	869.78	0.32	-0.26	32.59
5,963.00	1.14	293.99	5,835.16	413.51	764.73	869.34	1.24	1.01	-86.04
6,054.00	1.14	303.66	5,926.14	414.38	763.15	868.35	0.21	0.00	10.63
6,144.00	0.93	281.44	6,016.13	415.02	761.69	867.36	0.50	-0.23	-24.69
6,235.00	0.97	273.50	6,107.11	415.21	760.19	866.13	0.15	0.04	-8.73
6,325.00	1.10	275.64	6,197.10	415.34	758.57	864.77	0.15	0.14	2.38
6,416.00	0.87	271.73	6,288.09	415.45	757.01	863.44	0.26	-0.25	-4.30
6,507.00	0.74	273.68	6,379.08	415.51	755.74	862.34	0.15	-0.14	2.14
6,597.00	0.72	251.45	6,469.07	415.37	754.62	861.28	0.31	-0.02	-24.70
6,688.00	0.59	225.60	6,560.06	414.86	753.74	860.27	0.35	-0.14	-28.41
6,778.00	0.74	204.17	6,650.06	414.00	753.17	859.37	0.32	0.17	-23.81
6,869.00	0.33	114.10	6,741.05	413.36	753.17	859.06	0.89	-0.45	-98.98
6,959.00	0.60	88.06	6,831.05	413.27	753.88	859.65	0.37	0.30	-28.93
7,050.00	0.82	99.71	6,922.04	413.18	755.00	860.59	0.29	0.24	12.80
7,140.00	0.78	68.98	7,012.04	413.29	756.20	861.71	0.47	-0.04	-34.14
7,231.00	1.17	71.16	7,103.02	413.81	757.66	863.24	0.43	0.43	2.40
7,321.00	1.20	62.29	7,193.00	414.54	759.37	865.09	0.21	0.03	-9.86
7,412.00	1.02	14.75	7,283.99	415.77	760.42	866.59	1.00	-0.20	-52.24
7,503.00	0.60	40.98	7,374.98	416.91	760.93	867.59	0.60	-0.46	28.82
7,593.00	0.77	33.21	7,464.97	417.77	761.57	868.56	0.21	0.19	-8.63
7,684.00	0.44	65.25	7,555.97	418.43	762.23	869.44	0.51	-0.36	35.21
7,774.00	0.31	95.64	7,645.97	418.55	762.78	869.99	0.26	-0.14	33.77
Last SDI Production MWD Survey									
8,615.00	0.31	95.64	8,486.95	418.11	767.31	873.78	0.00	0.00	0.00
Projection To TD									

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
NBU 1022-14A4S PBHL	0.00	0.00	8,476.00	405.03	763.20	597,200.90	2,588,868.51	39° 57' 14.350 N	109° 23' 57.066 W
- actual wellpath misses target center by 13.69ft at 8604.03ft MD (8475.99 TVD, 418.11 N, 767.25 E)									
- Circle (radius 25.00)									

Checked By: _____ Approved By: _____ Date: _____

Kerr McGee Oil and Gas Onshore LP

Uintah County, UT NAD27
NBU 1022-14B Pad
NBU 1022-14A4S
OH

Design: OH

Survey Report - Geographic

27 October, 2009

Scientific Drilling International

Survey Report - Geographic

Company:	Kerr McGee Oil and Gas Onshore LP	**Local Co-ordinate Reference:**	Well NBU 1022-14A4S
Project:	Uintah County, UT NAD27	**TVD Reference:**	GL 5234' & RKB 14' @ 5248.00ft (Ensign 139)
Site:	NBU 1022-14B Pad	**MD Reference:**	GL 5234' & RKB 14' @ 5248.00ft (Ensign 139)
Well:	NBU 1022-14A4S	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 2003.16 Multi-User Db

Project	Uintah County, UT NAD27		
Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Utah Central 4302		

Site	NBU 1022-14B Pad, Sec 14 T10S R22E				
Site Position:		**Northing:**	596,779.27 ft	**Latitude:**	39° 57' 10.368 N
From:	Lat/Long	**Easting:**	2,588,074.96 ft	**Longitude:**	109° 24' 7.381 W
Position Uncertainty:	0.00 ft	**Slot Radius:**	in	**Grid Convergence:**	1.34 °

Well	NBU 1022-14A4S, 1230' FNL 1377' FEL					
Well Position	**+N/-S**	0.00 ft	**Northing:**	596,778.07 ft	**Latitude:**	39° 57' 10.347 N
	+E/-W	0.00 ft	**Easting:**	2,588,115.02 ft	**Longitude:**	109° 24' 6.867 W
Position Uncertainty		0.00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	5,234.00 ft

Wellbore	OH				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2005-10	10/21/2008	11.35	65.92	52,603

Design	OH					
Audit Notes:						
Version:	1.0	**Phase:**	ACTUAL	**Tie On Depth:**	10.00	
Vertical Section:	**Depth From (TVD) (ft)**	**+N/-S (ft)**	**+E/-W (ft)**	**Direction (°)**		
	10.00	0.00	0.00	62.04		

Survey Program	**Date** 10/27/2009			
From (ft)	**To (ft)**	**Survey (Wellbore)**	**Tool Name**	**Description**
169.00	1,939.00	Survey #1 (OH)	MWD SDI	MWD - Standard ver 1.0.1
1,980.00	8,615.00	Survey #2 - Production (OH)	MWD SDI	MWD - Standard ver 1.0.1

Scientific Drilling International

Survey Report - Geographic

Company:	Kerr McGee Oil and Gas Onshore LP	**Local Co-ordinate Reference:**	Well NBU 1022-14A4S
Project:	Uintah County, UT NAD27	**TVD Reference:**	GL 5234' & RKB 14' @ 5248.00ft (Ensign 139)
Site:	NBU 1022-14B Pad	**MD Reference:**	GL 5234' & RKB 14' @ 5248.00ft (Ensign 139)
Well:	NBU 1022-14A4S	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 2003.16 Multi-User Db

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
10.00	0.00	0.00	10.00	0.00	0.00	596,778.07	2,588,115.02	39° 57' 10.347 N	109° 24' 6.867 W
169.00	0.17	132.03	169.00	-0.16	0.18	596,777.92	2,588,115.20	39° 57' 10.345 N	109° 24' 6.865 W
First SDI MWD Surface Survey									
259.00	0.27	133.89	259.00	-0.40	0.43	596,777.69	2,588,115.46	39° 57' 10.343 N	109° 24' 6.862 W
349.00	1.53	65.04	348.99	-0.04	1.67	596,778.08	2,588,116.69	39° 57' 10.346 N	109° 24' 6.846 W
429.00	2.30	46.81	428.94	1.51	3.81	596,779.68	2,588,118.79	39° 57' 10.362 N	109° 24' 6.818 W
519.00	2.42	39.98	518.87	4.20	6.35	596,782.43	2,588,121.27	39° 57' 10.388 N	109° 24' 6.786 W
609.00	2.53	44.17	608.78	7.08	8.95	596,785.37	2,588,123.80	39° 57' 10.417 N	109° 24' 6.752 W
699.00	2.44	39.67	698.70	9.98	11.56	596,788.33	2,588,126.34	39° 57' 10.446 N	109° 24' 6.719 W
789.00	2.34	44.46	788.62	12.77	14.07	596,791.17	2,588,128.79	39° 57' 10.473 N	109° 24' 6.686 W
879.00	2.33	43.71	878.55	15.40	16.62	596,793.87	2,588,131.28	39° 57' 10.499 N	109° 24' 6.654 W
969.00	2.22	42.79	968.47	18.00	19.07	596,796.52	2,588,133.66	39° 57' 10.525 N	109° 24' 6.622 W
1,059.00	2.20	39.08	1,058.41	20.62	21.34	596,799.20	2,588,135.87	39° 57' 10.551 N	109° 24' 6.593 W
1,149.00	2.13	40.29	1,148.34	23.24	23.51	596,801.86	2,588,137.98	39° 57' 10.577 N	109° 24' 6.565 W
1,239.00	1.96	37.88	1,238.29	25.73	25.54	596,804.40	2,588,139.95	39° 57' 10.601 N	109° 24' 6.539 W
1,329.00	1.58	45.91	1,328.24	27.81	27.37	596,806.52	2,588,141.74	39° 57' 10.622 N	109° 24' 6.515 W
1,419.00	1.42	53.04	1,418.21	29.34	29.16	596,808.10	2,588,143.48	39° 57' 10.637 N	109° 24' 6.493 W
1,509.00	1.32	70.77	1,508.19	30.36	31.03	596,809.15	2,588,145.33	39° 57' 10.647 N	109° 24' 6.469 W
1,599.00	1.64	40.07	1,598.16	31.68	32.83	596,810.52	2,588,147.10	39° 57' 10.660 N	109° 24' 6.445 W
1,689.00	2.44	38.55	1,688.10	34.17	34.86	596,813.05	2,588,149.07	39° 57' 10.685 N	109° 24' 6.419 W
1,779.00	2.41	43.77	1,778.02	37.03	37.36	596,815.97	2,588,151.50	39° 57' 10.713 N	109° 24' 6.387 W
1,869.00	2.07	39.20	1,867.95	39.66	39.70	596,818.65	2,588,153.78	39° 57' 10.739 N	109° 24' 6.357 W
1,939.00	1.94	46.08	1,937.91	41.46	41.35	596,820.49	2,588,155.39	39° 57' 10.757 N	109° 24' 6.336 W
Last SDI MWD Surface Survey									
1,980.00	1.92	41.63	1,978.88	42.45	42.30	596,821.51	2,588,156.32	39° 57' 10.766 N	109° 24' 6.324 W
First SDI Production MWD Survey									
2,070.00	3.02	65.06	2,068.80	44.58	45.46	596,823.71	2,588,159.42	39° 57' 10.787 N	109° 24' 6.283 W
2,161.00	6.01	75.18	2,159.51	46.81	52.24	596,826.10	2,588,166.15	39° 57' 10.810 N	109° 24' 6.196 W
2,251.00	6.86	71.16	2,248.94	49.75	61.88	596,829.27	2,588,175.72	39° 57' 10.839 N	109° 24' 6.072 W
2,342.00	8.64	68.65	2,339.11	54.00	73.39	596,833.78	2,588,187.13	39° 57' 10.881 N	109° 24' 5.925 W
2,432.00	8.98	67.99	2,428.05	59.09	86.20	596,839.17	2,588,199.81	39° 57' 10.931 N	109° 24' 5.760 W
2,522.00	9.51	64.05	2,516.88	64.97	99.40	596,845.36	2,588,212.87	39° 57' 10.989 N	109° 24' 5.591 W
2,613.00	12.50	73.63	2,606.20	71.04	115.61	596,851.81	2,588,228.93	39° 57' 11.049 N	109° 24' 5.382 W
2,704.00	14.88	68.80	2,694.61	78.04	135.95	596,859.29	2,588,249.11	39° 57' 11.118 N	109° 24' 5.121 W
2,794.00	17.50	67.50	2,781.04	87.40	159.23	596,869.19	2,588,272.16	39° 57' 11.211 N	109° 24' 4.822 W
2,885.00	19.21	61.32	2,867.41	99.83	185.01	596,882.21	2,588,297.64	39° 57' 11.333 N	109° 24' 4.491 W
2,975.00	21.63	61.76	2,951.75	114.78	212.62	596,897.81	2,588,324.89	39° 57' 11.481 N	109° 24' 4.137 W
3,066.00	24.18	57.79	3,035.57	132.66	243.17	596,916.40	2,588,355.02	39° 57' 11.658 N	109° 24' 3.744 W
3,156.00	24.53	60.60	3,117.57	151.65	275.04	596,936.14	2,588,386.43	39° 57' 11.846 N	109° 24' 3.335 W
3,247.00	23.77	59.38	3,200.60	170.27	307.29	596,955.50	2,588,418.23	39° 57' 12.030 N	109° 24' 2.921 W
3,338.00	23.15	58.44	3,284.08	188.97	338.31	596,974.93	2,588,448.81	39° 57' 12.215 N	109° 24' 2.522 W
3,428.00	21.45	57.73	3,367.35	207.02	367.30	596,993.65	2,588,477.37	39° 57' 12.393 N	109° 24' 2.150 W
3,519.00	20.83	59.94	3,452.22	224.01	395.37	597,011.29	2,588,505.03	39° 57' 12.561 N	109° 24' 1.790 W
3,609.00	20.87	64.44	3,536.33	238.94	423.69	597,026.89	2,588,532.99	39° 57' 12.708 N	109° 24' 1.426 W
3,700.00	21.13	60.20	3,621.30	254.09	452.55	597,042.71	2,588,561.48	39° 57' 12.858 N	109° 24' 1.055 W
3,790.00	20.57	65.82	3,705.41	268.63	481.05	597,057.91	2,588,589.64	39° 57' 13.002 N	109° 24' 0.689 W
3,881.00	23.37	69.08	3,789.80	281.62	512.50	597,071.64	2,588,620.77	39° 57' 13.130 N	109° 24' 0.286 W
3,972.00	20.56	68.01	3,874.18	294.05	544.18	597,084.81	2,588,652.16	39° 57' 13.253 N	109° 23' 59.879 W
4,062.00	19.01	65.16	3,958.87	306.13	572.14	597,097.54	2,588,679.82	39° 57' 13.372 N	109° 23' 59.520 W
4,153.00	19.16	61.25	4,044.87	319.54	598.68	597,111.57	2,588,706.04	39° 57' 13.505 N	109° 23' 59.179 W
4,243.00	16.98	61.90	4,130.43	332.83	623.23	597,125.43	2,588,730.27	39° 57' 13.636 N	109° 23' 58.864 W
4,334.00	15.91	63.04	4,217.70	344.75	646.07	597,137.88	2,588,752.82	39° 57' 13.754 N	109° 23' 58.570 W
4,424.00	14.15	62.40	4,304.62	355.44	666.81	597,149.05	2,588,773.31	39° 57' 13.860 N	109° 23' 58.304 W
4,515.00	12.15	62.92	4,393.23	364.95	685.20	597,159.00	2,588,791.47	39° 57' 13.954 N	109° 23' 58.068 W
4,605.00	10.19	65.15	4,481.52	372.61	700.86	597,167.02	2,588,806.95	39° 57' 14.029 N	109° 23' 57.867 W

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Survey Report - Geographic

Company:	Kerr McGee Oil and Gas Onshore LP	**Local Co-ordinate Reference:**	Well NBU 1022-14A4S
Project:	Uintah County, UT NAD27	**TVD Reference:**	GL 5234' & RKB 14' @ 5248.00ft (Ensign 139)
Site:	NBU 1022-14B Pad	**MD Reference:**	GL 5234' & RKB 14' @ 5248.00ft (Ensign 139)
Well:	NBU 1022-14A4S	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 2003.16 Multi-User Db

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
4,696.00	8.61	62.99	4,571.30	379.08	714.23	597,173.81	2,588,820.16	39° 57' 14.093 N	109° 23' 57.695 W
4,786.00	7.40	64.60	4,660.42	384.63	725.47	597,179.62	2,588,831.27	39° 57' 14.148 N	109° 23' 57.551 W
4,877.00	6.78	69.10	4,750.72	389.06	735.78	597,184.29	2,588,841.47	39° 57' 14.192 N	109° 23' 57.418 W
4,967.00	6.35	69.33	4,840.13	392.71	745.40	597,188.16	2,588,851.01	39° 57' 14.228 N	109° 23' 57.295 W
5,058.00	5.10	54.20	4,930.68	396.86	753.39	597,192.49	2,588,858.90	39° 57' 14.269 N	109° 23' 57.192 W
5,148.00	3.63	64.77	5,020.42	400.41	759.21	597,196.18	2,588,864.63	39° 57' 14.304 N	109° 23' 57.117 W
5,239.00	2.16	70.63	5,111.30	402.21	763.44	597,198.08	2,588,868.81	39° 57' 14.322 N	109° 23' 57.063 W
5,329.00	1.74	15.86	5,201.26	404.08	765.41	597,200.00	2,588,870.74	39° 57' 14.341 N	109° 23' 57.038 W
5,420.00	1.23	24.31	5,292.23	406.30	766.19	597,202.24	2,588,871.47	39° 57' 14.362 N	109° 23' 57.028 W
5,510.00	1.35	353.88	5,382.20	408.24	766.47	597,204.18	2,588,871.71	39° 57' 14.382 N	109° 23' 57.024 W
5,601.00	1.17	349.88	5,473.18	410.22	766.20	597,206.15	2,588,871.38	39° 57' 14.401 N	109° 23' 57.028 W
5,691.00	0.64	341.07	5,563.17	411.60	765.87	597,207.52	2,588,871.03	39° 57' 14.415 N	109° 23' 57.032 W
5,782.00	0.47	341.77	5,654.17	412.43	765.59	597,208.35	2,588,870.73	39° 57' 14.423 N	109° 23' 57.035 W
5,873.00	0.23	11.43	5,745.16	412.97	765.51	597,208.88	2,588,870.63	39° 57' 14.428 N	109° 23' 57.036 W
5,963.00	1.14	293.99	5,835.16	413.51	764.73	597,209.41	2,588,869.84	39° 57' 14.434 N	109° 23' 57.046 W
6,054.00	1.14	303.66	5,926.14	414.38	763.15	597,210.24	2,588,868.24	39° 57' 14.442 N	109° 23' 57.067 W
6,144.00	0.93	281.44	6,016.13	415.02	761.69	597,210.85	2,588,866.76	39° 57' 14.449 N	109° 23' 57.085 W
6,235.00	0.97	273.50	6,107.11	415.21	760.19	597,211.00	2,588,865.27	39° 57' 14.451 N	109° 23' 57.105 W
6,325.00	1.10	275.64	6,197.10	415.34	758.57	597,211.10	2,588,863.64	39° 57' 14.452 N	109° 23' 57.125 W
6,416.00	0.87	271.73	6,288.09	415.45	757.01	597,211.17	2,588,862.08	39° 57' 14.453 N	109° 23' 57.145 W
6,507.00	0.74	273.68	6,379.08	415.51	755.74	597,211.20	2,588,860.80	39° 57' 14.453 N	109° 23' 57.162 W
6,597.00	0.72	251.45	6,469.07	415.37	754.62	597,211.03	2,588,859.69	39° 57' 14.452 N	109° 23' 57.176 W
6,688.00	0.59	225.60	6,560.06	414.86	753.74	597,210.50	2,588,858.83	39° 57' 14.447 N	109° 23' 57.187 W
6,778.00	0.74	204.17	6,650.06	414.00	753.17	597,209.63	2,588,858.28	39° 57' 14.439 N	109° 23' 57.195 W
6,869.00	0.33	114.10	6,741.05	413.36	753.17	597,208.99	2,588,858.29	39° 57' 14.432 N	109° 23' 57.195 W
6,959.00	0.60	88.06	6,831.05	413.27	753.88	597,208.91	2,588,859.00	39° 57' 14.431 N	109° 23' 57.186 W
7,050.00	0.82	99.71	6,922.04	413.18	755.00	597,208.85	2,588,860.12	39° 57' 14.430 N	109° 23' 57.171 W
7,140.00	0.78	68.98	7,012.04	413.29	756.20	597,208.99	2,588,861.32	39° 57' 14.431 N	109° 23' 57.156 W
7,231.00	1.17	71.16	7,103.02	413.81	757.66	597,209.54	2,588,862.77	39° 57' 14.437 N	109° 23' 57.137 W
7,321.00	1.20	62.29	7,193.00	414.54	759.37	597,210.32	2,588,864.46	39° 57' 14.444 N	109° 23' 57.115 W
7,412.00	1.02	14.75	7,283.99	415.77	760.42	597,211.57	2,588,865.48	39° 57' 14.456 N	109° 23' 57.102 W
7,503.00	0.60	40.98	7,374.98	416.91	760.93	597,212.72	2,588,865.97	39° 57' 14.467 N	109° 23' 57.095 W
7,593.00	0.77	33.21	7,464.97	417.77	761.57	597,213.60	2,588,866.59	39° 57' 14.476 N	109° 23' 57.087 W
7,684.00	0.44	65.25	7,555.97	418.43	762.23	597,214.27	2,588,867.22	39° 57' 14.482 N	109° 23' 57.079 W
7,774.00	0.31	95.64	7,645.97	418.55	762.78	597,214.40	2,588,867.78	39° 57' 14.484 N	109° 23' 57.071 W
Last SDI Production MWD Survey									
8,615.00	0.31	95.64	8,486.95	418.11	767.31	597,214.06	2,588,872.32	39° 57' 14.479 N	109° 23' 57.013 W
Projection To TD									

Scientific Drilling International

Survey Report - Geographic

Company:	Kerr McGee Oil and Gas Onshore LP	**Local Co-ordinate Reference:**	Well NBU 1022-14A4S
Project:	Uintah County, UT NAD27	**TVD Reference:**	GL 5234' & RKB 14' @ 5248.00ft (Ensign 139)
Site:	NBU 1022-14B Pad	**MD Reference:**	GL 5234' & RKB 14' @ 5248.00ft (Ensign 139)
Well:	NBU 1022-14A4S	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 2003.16 Multi-User Db

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
NBU 1022-14A4S PBHL	0.00	0.00	8,476.00	405.03	763.20	597,200.90	2,588,868.51	39° 57' 14.350 N	109° 23' 57.066 W
- actual wellpath misses target center by 13.69ft at 8604.03ft MD (8475.99 TVD, 418.11 N, 767.25 E)									
- Circle (radius 25.00)									

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
169.00	169.00	-0.16	0.18	First SDI MWD Surface Survey
1,939.00	1,937.91	41.46	41.35	Last SDI MWD Surface Survey
1,980.00	1,978.88	42.45	42.30	First SDI Production MWD Survey
7,774.00	7,645.97	418.55	762.78	Last SDI Production MWD Survey
8,615.00	8,486.95	418.11	767.31	Projection To TD

Checked By: _____ Approved By: _____ Date: _____

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-14A4S GREEN	Spud Conductor: 8/17/2009	Spud Date: 8/27/2009	
Project: UTAH-UINTAH	Site: NBU 1022-14B PAD		Rig Name No: ENSIGN 139/139, PROPETRO/
Event: DRILLING	Start Date: 7/21/2009		End Date: 10/28/2009
Active Datum: RKB @5,249.01ft (above Mean Sea Level)	UWI: NW/NE/0/10/S/22/E/14/0/0/26/PM/N/1,230.00/E/0/1,377.00/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
8/27/2009	17:30 - 19:00	1.50	DRLSUR	01	A	P		R/U PROPETRO 12 - R/U AIR BOWL;BLOOY LINE,COMP,AND BOOSTER
	19:00 - 21:00	2.00	DRLSUR	02	A	P		P/U AIR HAMMER,SPUD-8-27-09 @1900 HRS,DRILL F/ 44' TO 180'
	21:00 - 22:00	1.00	DRLSUR	06	A	P		LAY DOWN HAMMER TOOLS, P/U DIR TOOLS AND ORIENT
	22:00 - 0:00	2.00	DRLSUR	02	D	P		DRLG F/ 180' TO 220'
8/28/2009	0:00 - 17:00	17.00	DRLSUR	02	D	P		DRLG-F/220' TO 1980' (TD) ROTATE SLIDE - WATER AT 1460'
	17:00 - 18:00	1.00	DRLSUR	05	C	P		CIRC, TO L/D TOOLS
	18:00 - 21:00	3.00	DRLSUR	21	E	P		CIRC,WAIT ON TOOLS F/ PROPETRO 11
	21:00 - 0:00	3.00	DRLSUR	06	A	P		L/D TOOLS - BHA
8/29/2009	0:00 - 1:00	1.00	DRLSUR	06	A	P		FINISH L/D TOOLS
	1:00 - 3:00	2.00	DRLSUR	12	C	P		R/U RUN 43 JOINTS 9 5/8 36# J55 CSNG, SHOE @ 1898.70 BAFFLE @ 1854' RELEASE AT 03:00 8-29-09
	3:00 - 6:00	3.00	DRLSUR	12	E	P		CMNT W/ PRO PETRO-TAIL 250SX15.8# 1.15 YLD FLOAT OK 450SX 15.8# 1.15 YLD ON TOP OUTS
10/21/2009	2:00 - 6:00	4.00	DRLPRO	01	C	P		R/D - SKID RIG - R/U
	6:00 - 8:00	2.00	DRLPRO	14	A	P		NIPPLE UP B.O.P'S & FLARE LINES
	8:00 - 8:30	0.50	DRLPRO	23		P		PRE SPUD SAFETY INSPECTION W/ SAFETY MEETING
	8:30 - 12:00	3.50	DRLPRO	15	A	P		TEST B.O.P'S - BLIND - PIPE RAMS - 2"-4" -HCR - CHOKE MAINFOLD - 250 LOW - 5000 HIGH - ANNULAR 250 LOW 2500 HIGH - CASING 1500 PSI.
	12:00 - 12:30	0.50	DRLPRO	14	B	P		SET WEAR BUSHING
	12:30 - 13:30	1.00	DRLPRO	06	A	P		P/U BIT & MOTOR & SCRIBE DIR TOOLS
	13:30 - 15:30	2.00	DRLPRO	06	A	P		T.I.H & TAG CEMENT @ 1794
	15:30 - 17:00	1.50	DRLPRO	02	F	P		DRILL CEMENT & FLOAT EQUIPMENT
	17:00 - 0:00	7.00	DRLPRO	02	D	P		DRILL-SLIDE F/ 1990 TO 2795 - 805' - @ 115.0 FPH W/ 8.3 PPG MUD WT VIS 26 - WOB 14/16 - RPM 45 - MRPM 112 - TQ 5/3 - GPM 486
10/22/2009	0:00 - 11:30	11.50	DRLPRO	02	D	P		DRILL-SLIDE F/ 2795 TO 3845 - 1050' - @ 91.3 FPH W/ 8.4 PPG MUD WT - RPM 45 - MRPM 112 - WOB 14/16 - TQ 10/8 - GPM 486
	11:30 - 12:00	0.50	DRLPRO	07	A	P		SER RIG
	12:00 - 0:00	12.00	DRLPRO	02	D	P		DRILL - SLIDE F/ 3845 TO 5065 - 1220' @ 101.6 FPH W/ 8.4 PPG MUD WT VIS 27 - RPM 45 - MRPM 112 - WOB 14/16 -TQ 10/8 - GPM 486
10/23/2009	0:00 - 14:00	14.00	DRLPRO	02	D	P		DRILL-SLIDE F/ 5065 TO 6018 - 953' @ 68.0FPH W/ 8.4 PPG MUD WT VIS 26 - RPM 45 - MRPM 112 - WOB 14/16 - TQ 12/8 - GPM 486
	14:00 - 14:30	0.50	DRLPRO	07	A	P		SER RIG
	14:30 - 0:00	9.50	DRLPRO	02	D	P		DRILL-SLIDE F/ 6018 TO 6455 -337' - 35.4 FPH W/ 9.0 PPG MUD WT VIS 40 - WOB 16/18 - RPM 45 - MRPM 112 - TQ 13/9 - GPM 486 MUD UP SYSTEM
10/24/2009	0:00 - 14:00	14.00	DRLPRO	02	D	P		DRILL-SLIDE F/ 6455 TO 7105 - 650' @ 46.4 FPH W/ 10.4 PPG MUD WT VIS 40 - RPM 45 - MRPM 112 - WOB 18/20 TQ 13/9 - GPM 486
	14:00 - 14:30	0.50	DRLPRO	07	A	P		SER RIG
	14:30 - 0:00	9.50	DRLPRO	02	D	P		DRILL-SLIDE F/ 7105 TO 7410 - 305' @ 32.1 FPH W/ 11.2 PPG MUD WT VIS 40 - RPM 45 - MRPM 112 - WOB - TQ 13/9 - GPM 486

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-14A4S GREEN	Spud Conductor: 8/17/2009	Spud Date: 8/27/2009
Project: UTAH-UINTAH	Site: NBU 1022-14B PAD	Rig Name No: ENSIGN 139/139, PROPETRO/
Event: DRILLING	Start Date: 7/21/2009	End Date: 10/28/2009
Active Datum: RKB @5,249.01ft (above Mean Sea Level)	UWI: NW/NE/0/10/S/22/E/14/0/0/26/PM/N/1,230.00/E/0/1,377.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
10/25/2009	0:00 - 16:30	16.50	DRLPRO	02	D	P		DRILL-SLIDE F/ 7410 TO 7862 - 452' @ 27.3 FPH W/ 11.7 PPG MUD WT VIS 40 - RPM 45 - MRPM 112 - WOB 18/24 - TQ 14/10 - GPM 486
	16:30 - 22:30	6.00	DRLPRO	06	A	P		PUMP DRY JOB & T.F.N.B - STAND BACK DIR IN DERRICK (90 K OVER STRING WT OF 197
	22:30 - 0:00	1.50	DRLPRO	08	A	Z		C/O IBOP VALVE ON TOP DRIVE
10/26/2009	0:00 - 6:30	6.50	DRLPRO	06	A	P		P/U MOTOR-BIT-MONEL & T.I.H
	6:30 - 7:00	0.50	DRLPRO	03	E	P		WASH 90' TO BTM (10' OF FILL)
	7:00 - 12:30	5.50	DRLPRO	02	D	P		DRILL F/ 7862 TO 8132 - 270' @ 49.0 FPH W/ 11.8 PPG MUD WT VIS 44 - RPM 45 - MRPM 68 - WOB 18/20 - TQ 14/10 - GPM 486
	12:30 - 13:00	0.50	DRLPRO	07	A	P		SER RIG
	13:00 - 21:30	8.50	DRLPRO	02	D	P		DRILL F/ 8132 TO 8615 - 483' @ 56.8 W/ 12.2 PPG MUD WT VIS 45 -RPM 45 - MRPM 68 - WOB 18/20 - TQ 14/10 - GPM 486 - TD WELL @ 21:30 HRS ON 10/26/2009
	21:30 - 22:30	1.00	DRLPRO	05	A	P		CIRC BTM UP
	22:30 - 0:00	1.50	DRLPRO	06	E	P		SHORT TRIP 10 STANDS (PULL 70 K OVER STRING WT 199 K)
10/27/2009	0:00 - 0:30	0.50	DRLPRO	06	E	P		FINISH SHORT TRIP
	0:30 - 1:30	1.00	DRLPRO	05	A	P		CIRC BTM UP
	1:30 - 7:30	6.00	DRLPRO	06	B	P		PUMP DRT JOB & DROP SURVEY & T.O.H F/ LOGS (PULLED 60 OVER STRING WT OF 199K
	7:30 - 8:00	0.50	DRLPRO	14	B	P		PULL WEAR BUSHING
	8:00 - 14:30	6.50	DRLPRO	11	D	P		HELD SAFETY MEETING RUN TRIPLE COMBO & LOGGER DEPTH @ 8610- HOLE DEPTH @ 8615
	14:30 - 19:30	5.00	DRLPRO	12	C	P		R/U & RUN 4 1/2 - I 80 BTC - RUN 203 JTS PLUS MARKER SET @ 8594.42 - FLOAT COLLAR @ 8550.97 .
	19:30 - 20:30	1.00	DRLPRO	05	A	P		CIRC BTM UP
	20:30 - 0:00	3.50	DRLPRO	05	A	P		WAIT ON HALLIBURTON & CIRC (ARRIVE ON LOC. @ 23:30 START R/U)
10/28/2009	0:00 - 1:00	1.00	DRLPRO	05	A	P		CIRC WHILE HALLIBURTON R/U
	1:00 - 4:00	3.00	DRLPRO	12	E	P		HELD SAFETY MEETING & R/U HALLIBURTON CEMENT HEAD & TEST LINES 4000 PSI & CEMENT W/ 40 BBLS WATER AHEAD & F/ LEAD 555 SKS @ 12.5 PPG YIELD 1.97 & F/ TAIL 1350 SKS @ 14.3 PPG YIELD 1.25 & DROP PLUG & DISPLACED W/ 133 BBLS WATER BUMP W/ 500 OVER FINAL CIRC PSI OF 2530 - PLUG HELD - GOT BACK 1.5 BBLS CEMENT TO SURFACE - FULL RETURNS DURING JOB.
	4:00 - 10:00	6.00	DRLPRO	14	B	P		TRY SET HANGER WOULDN'T SET PIPE STUCK - NIPPLE DOWN & P/U STACK & SET SLIPS W/ 120 K STRING WT & CUT OFF 4 1/2 CASING & WASH CLEAN OUT MUD TANKS & TRANS 750 BBLS MUD TO STORAGE TANKS & RELEASED RIG @ 10:00 HRS ON 10/28/2009.

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-14A4S GREEN	Spud Conductor: 8/17/2009	Spud Date: 8/27/2009
Project: UTAH-UINTAH	Site: NBU 1022-14B PAD	Rig Name No: MILES-GRAY 1/1
Event: COMPLETION	Start Date: 6/25/2010	End Date: 8/9/2010
Active Datum: RKB @5,249.01ft (above Mean Sea Level)	UWI: NW/NE/0/10/S/22/E/14/0/0/26/PM/N/1,230.00/E/0/1,377.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
7/21/2010	7:00 - 7:30	0.50	COMP	48		P		HSM, RIGGING UP RIG & EQUIP
	7:30 - 8:30	1.00	COMP	30	A	P		RU RIG ND WH NU BOPS, RU FLOOR & TBG EQUIP.
	8:30 - 17:00	8.50	COMP	31	I	P		TALLY & PU 37/8 BIT & 270 JTS 23/8 L-80, TAG UP @ 8535' RU CIRC WELL CLEAN. L/D 200 JTS 23/8, SWI SDFN
7/22/2010	7:00 - 7:30	0.50	COMP	48		P		HSM, LAYING DWN TBG ON FLOAT
	7:30 - 10:00	2.50	COMP	31	I	P		L/D REM 70 JTS 23/8 L-80, L/D BIT, ND BOPS, NU FRAC VALVES. RDMOL.

7/26/2010	11:30 - 13:30	2.00	COMP	36	E	P		(STG #1) RIH W/ PERF GUN, PERF THE MESAVERDE @ 8491' - 8494', 8398' - 8402', 8387' - 8390', 4-spf USING 3 3/8" SCALLOP GUNS, 23gm, 0.36" HOLE, 90* PHS, 40 HOLES, WHP = 987 #,
								SPOT 250 GALS 15% HCL ON PERF, STEP DOWN TEST = 49.4 B/M @ 4465 #, DROP 2 PUMPS, RATE @ 36 B/M @ 3780 #, DROP 1 PUMPS, RATE @ 21 B/M @ 3150 #, DROP 1 PUMP, RATE @ 8.8 B/M @ 2750 #, SHUT DOWN,
								ISIP = 2495 #, F..G.= 0.73 , INJ-RT = 44.5 B/M, INJ-P 4850 #, CALC ALL PERF OPEN, PUMP 1169 BBLS SLK WTR AND 41010 # OTTAWA SAND, ISIP = 2613 #, F.G.= 0.74 , NPI = 118 #, MP = 5296 #, MR = 50.4 B/M, AP = 4100 #, AR = 49.3 B/M, 36010 # 30/50 SD, 5000 # SLC SD,
								COMMENTS = GOOD JOB
								
								(STG #2) RIH W/ HALLIBURTON 8K CBP AND PERF GUN, SET THE CBP @ 8206 ', PERF THE MESAVERDE @ 8104' - 8106', 8088' - 8090', 8026' - 8030', 7996' - 7998 ', 4-spf, USING 3 3/8" SCALLOP GUNS, 23gm, 0.36" HOLE, 90* PHS, 40 HOLES,

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-14A4S GREEN	Spud Conductor: 8/17/2009	Spud Date: 8/27/2009	
Project: UTAH-UINTAH	Site: NBU 1022-14B PAD		Rig Name No: MILES-GRAY 1/1
Event: COMPLETION	Start Date: 6/25/2010		End Date: 8/9/2010
Active Datum: RKB @5,249.01ft (above Mean Sea Level)	UWI: NW/NE/0/10/S/22/E/14/0/0/26/PM/N/1,230.00/E/0/1,377.00/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
7/27/2010	7:00 - 17:00	10.00	COMP	36	E	P		(STG #2) WHP = 1680 #, STEP DOWN TEST = 50 B/M @ 4768 #, DROP 2 PUMPS, RATE @ 39 B/M @ 3895 #, DROP 2 PUMPS, RATE @ 20.6 B/M @ 3043 #, DROP 1 PUMP, RATE @ 8.9 B/M @ 2697 #, SHUT DOWN, ISIP = 2401 #, F..G.= 0.73 , INJ-RT = 51.2 B/M, INJ-P= 4730 #, CALC ALL PERF OPEN, PUMP 2274 BBLS SLK WTR AND 89638 # OTTAWA SAND, ISIP = 2713 #, F.G.= 0.77 , NPI = 312 #, MP = 5561 #, MR = 52.1 B/M, AP = 4000 #, AR = 51.5 B/M, 84638 # 30/50 SD, 5000 # SLC SD, COMMENTS = GOOD JOB (STG #3) RIH W/ HALLIBURTON 8K CBP AND PERF GUN, SET THE CBP @ 7946 ', PERF THE MESAVERDE @ 7907' - 7910', 4-SPF, 7887' - 7889', 3-SPF, 7857' - 7859', 4-SPF, 7806' - 7808', 4-SPF, 7756' - 7758', 4-SPF, USING 3 3/8" SCALLOP GUNS, 23gm, 0.36" HOLE, 90* PHS, 42 HOLES, WHP = 2309 #, STEP DOWN TEST = 50 B/M @ 5047 #, DROP 2 PUMPS, RATE @ 40.6 B/M @ 4395 #, DROP 2 PUMPS, RATE @ 27.7 B/M @ 3566 #, DROP 1 PUMP, RATE @ 8.8 B/M @ 2855 #, SHUT DOWN, ISIP = 2613 #, F..G.= 0.77 , INJ-RT = 49.5 B/M, INJ-P = 4548 #, CALC ALL PERF OPEN, PUMP 2613 BBLS SLK WTR AND 107443 # OTTAWA SAND, ISIP = 2501 #, F.G.= 0.75 , NPI = -112 #, MP = 6191 #, MR = 52.8 B/M, AP = 4500 #, AR = 47 B/M, 102443 # 30/50 SD, 5000 # SLC SD, COMMENTS = LOST ONE PUMP GOT ONE GOING, SRARTED SCREEN OFF ON FLUSH, (STG #4) RIH W/ HALLIBURTON 8K CBP AND PERF GUN, SET THE CBP @ 7490 ', PERF THE MESAVERDE @ 7388' - 7390', 7367' - 7370', 7215' - 7217', 7160' - 7162', 4-SPF, USING 3 3/8" SCALLOP GUNS, 23gm, 0.36" HOLE, 90* PHS, 36 HOLES,

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-14A4S GREEN	Spud Conductor: 8/17/2009	Spud Date: 8/27/2009
Project: UTAH-UINTAH	Site: NBU 1022-14B PAD	Rig Name No: MILES-GRAY 1/1
Event: COMPLETION	Start Date: 6/25/2010	End Date: 8/9/2010
Active Datum: RKB @5,249.01ft (above Mean Sea Level)	UWI: NW/NE/0/10/S/22/E/14/0/0/26/PM/N/1,230.00/E/0/1,377.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
7/30/2010	10:30 - 17:00	6.50	COMP	36	E	P		(STG #4) WHP = 1351 #, STEP DOWN TEST = 50.7 B/M @ 4401 #, DROP 2 PUMPS, RATE @ 36.9 B/M @ 3514 #, DROP 2 PUMPS, RATE @ 18.2 B/M @ 2803 #, DROP 1 PUMP, RATE @ 10 B/M @ 2562 #, SHUT DOWN, ISIP = 2313 #, F..G.= 0.75 , INJ-RT = 51.3 B/M, INJ-P = 3848 #, CALC ALL PERF OPEN, PUMP 823 BBLS SLK WTR AND 28933 # OTTAWA SAND, ISIP = 2501 #, F.G.= 0.78 , NPI = 188 #, MP = 4855 #, MR = 52 B/M, AP = 3600 #, AR = 51 B/M, 23933 # 30/50 SD, 5000 # SLC SD, COMMENTS = RA TRACER PUMP IN STG, GOOD JOB (STG #5) RIH W/ HALLIBURTON 8K CBP AND PERF GUN, SET THE CBP @ 7022 ', PERF THE MESAVERDE @ 6920' - 6922', 4-SPF, 6874' - 6876', 3-SPF, 6782' - 6784', 3-SPF, 6752' - 6753', 4-SPF, 6729' - 6733', 4-SPF, USING 3 3/8" SCALLOP GUNS, 23gm, 0.36" HOLE, 90* PHS, 40 HOLES, WHP = 981 #, STEP DOWN TEST = 50.8 B/M @ 4307 #, DROP 2 PUMPS, RATE @ 36.6 B/M @ 3437 #, DROP 2 PUMPS, RATE @ 18.1 B/M @ 2632 #, DROP 1 PUMP, RATE @ 10.2 B/M @ 2297 #, SHUT DOWN, ISIP = 2313 #, F..G.= 0.75 , INJ-RT = 51.3 B/M, INJ-P = 3848 #, CALC 93% PERF OPEN, PUMP 1211 BBLS SLK WTR AND 48549 # OTTAWA SAND, ISIP = 2307#, F.G.= 0.77 , NPI = 277 #, MP = 4519 #, MR = 52.6 B/M, AP = 3300 #, AR = 51.2 B/M, 43549 # 30/50 SD, 5000 # SLC SD, COMMENTS = RA TRACER PUMP IN STG, GOOD JOB (KILL PLUG) RIH W/ HALLIBURTON 8K CBP, SET CBP @ 6679', R/D WIRELINE AND FRAC CREW. TOTAL WTR = 8090 BBLS SLK WTR TOTAL SAND = 315573# OTTAWA SAND
8/9/2010	6:30 - 6:45	0.25	COMP	48		P		MIRU, N/U BOPS AND TBG EQUIPTMENT
	6:45 - 12:00	5.25	COMP	31	I	P		P/U 3 7/8" BIT AND POBS TIH W/ 2 3/8" TBG,TALLY TBGIN HOLE, TAG UP @ ', PRESSURE TEST BOPS , R/U PPOWER SWOVEL, ESTB CIRC DN TBG OUT CSG,

US ROCKIES REGION

Operation Summary Report

Well: NBU 1022-14A4S GREEN	Spud Conductor: 8/17/2009	Spud Date: 8/27/2009
Project: UTAH-UINTAH	Site: NBU 1022-14B PAD	Rig Name No: MILES-GRAY 1/1
Event: COMPLETION	Start Date: 6/25/2010	End Date: 8/9/2010
Active Datum: RKB @5,249.01ft (above Mean Sea Level)	UWI: NW/NE/0/10/S/22/E/14/0/0/26/PM/N/1,230.00/E/0/1,377.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	12:00 - 17:00	5.00	COMP	44	C	P		(PLUG #1) 6679', DRILL OUT HALLIBURTON 8K CBP IN 5 MIN, 100# DIFF, RIH TAG @ 6980', C/O 34' SAND FCP= 50#, (PLUG #2)7014', DRILL OUT HALLIBURTON 8K CBP IN 5 MIN, 100# DIFF, RIH TAG @ 7460', C/O 30' SAND, FCP = 150#, (PLUG #3) 7490' DRILL OUT HALLIBURTON 8K CBP IN 5 MIN, 500# DIFF, RIH TAG @ 7916', C/O 30' SAND, FCP = 250#, (PLUG #4) 7946', DRILL OUT HALLIBURTON 8K CBP IN 5 MIN, 500# DIFF, RIH TAG @ 8170', C/O 30' SAND, FCP = 500#, (PLUG #5) 8200', DRILL OUT HALLIBURTON 8K CBP IN 5 MIN, 500# DIFF, RIH TAG @8500', C/O 94' SAND TO PBTD 8549', CICR WELL CLEAN, R/D POWER SWIVEL, P/O LAYED TBG DN ON TRAILER, LAND TBG IN WELL HEAD @ 7959.44', DROP BALL DN TBG, N/D BOPS, N/U WELL HEAD, PUMP DN TBG PUMP OFF BIT SUB @ 1200#, OPEN WELL UP TO PIT W/ FTP 600# ,SICP 1200#, TURN WELL OVER TO FLOW BACK CREW W/ 6464 BBLS WTR LTR, SDFN 284 JTS 2 3/8" L-80 TBG DELIVERED 251 JTS 2 3/8" L-80 TBG LANDED 33 JTS 2 3/8" L-80 TBG RETURNED KB = 13.00' HANGER = .83' 251JTS 2 3/8" L-80 TBG = 7943.41' XN-NIPPLE, POBS = 2.20' EOT = 7959.44'
8/10/2010	7:00 -			33	A			7 AM FLBK REPORT: CP 2550#, TP 1775#, 20/64" CK, 40 BWPH, HVY SAND, LIGHT GAS TTL BBLS RECOVERED: 1835 BBLS LEFT TO RECOVER: 5829
	12:20 -		PROD	50				WELL TURNED TO SALES @ 12:20 HR ON 8/10/10 - 2300 MCFD, 960 BWPD, CP 2650#, FTP 1850#, CK 20/64"
8/11/2010	7:00 -			33	A			7 AM FLBK REPORT: CP 2750#, TP 1650#, 20/64" CK, 35 BWPH, HVY SAND, - GAS TTL BBLS RECOVERED: 2705 BBLS LEFT TO RECOVER: 4959
8/12/2010	7:00 -			33	A			7 AM FLBK REPORT: CP 2675#, TP 1400#, 20/64" CK, 30 BWPH, MED SAND, - GAS TTL BBLS RECOVERED: 3462 BBLS LEFT TO RECOVER: 4202
	7:00 -							WELL IP'D ON 8/12/10 - 2048 MCFD, 0 BOPD, 720 BWPD, CP 2675#, FTP 1400#, CK 20/64", LP 122#, 24 HRS

API Well No: 43047502270000

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: ST UO 01197A

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 1022-14A4S

2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER: 43047502270000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779 **PHONE NUMBER:** 720 929-6515 Ext

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1230 FNL 1377 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNE Section: 14 Township: 10.0S Range: 22.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
✓ NOTICE OF INTENT Approximate date work will start: 3/8/2011	☐ ACIDIZE	☐ ALTER CASING	✓ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ DRILLING REPORT Report Date:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

The operator request approval to conduct wellhead/casing repair operations on the subject well location. Please find the attached procedures for the proposed repair work for the subject well location.

Approved by the Utah Division of Oil, Gas and Mining

Date: 03/09/2011

By: Dark K Quist

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Gina Becker	720 929-6086	Regulatory Analyst II
SIGNATURE N/A		**DATE** 3/8/2011

WORKORDER #: 88120967 3/2/11

Name: NBU 1022-14A4S – 1022-14B PAD
Surface Location: NWNE SEC.14, T10S, R22E
Uintah County, UT

API: 4304750227 LEASE#: ST UO 01197 A

ELEVATIONS: 5234' GL 5247' KB

TOTAL DEPTH: 8615' PBTD: 8537'

SURFACE CASING: 9 5/8", 36# J-55 @ 1908'

PRODUCTION CASING: 4 1/2", 11.6#, I-80 @ 8580'
TOC @ ~712' per CBL

PERFORATIONS: Mesaverde 6729' – 8494'

Tubular/Borehole	Drift inches	Collapse psi	Burst psi	Capacities		
				Gal./ft.	Cuft/ft.	Bbl./ft.
2.375" 4.7# J-55 tbg.	1.901	8100	7700	0.1624	0.02173	0.00387
4.5" 11.6# I-80	3.875	6350	7780	0.6528	0.0872	0.01554
9.625" 36# J-55	8.921	2020	3520	3.247	0.434	0.0773
Annular Capacities						
2.375" tbg. X 4 ½" 11.6# csg				0.4227	0.0565	0.01006

GEOLOGICAL MARKERS, TOPS:

914' Green River
1215' Bird's Nest
1767' Mahogany
4185' Wasatch
6478' Mesaverde

NBU 1022-14A4S – WELLHEAD REPLACEMENT PROCEDURE

PREP-WORK PRIOR TO MIRU:

1. Dig out down to the 2" surface casing valve or to the valve on the riser off the surface casing.

2. Install a tee with 2 valves, with a pressure gauge and sensor on one valve.

3. Open casing valve and record pressures.

4. Install nipple and steel hose on the other valve, the relief valve,. Do not use hammer unions. No impact equipment or tools to be used for any of this installation. Extend hose and hard piping to a downwind location at least 100' from the wellhead. Consider installing a manifold so that vent area could be in two locations approx. 90 degrees apart from the wellhead.

5. Open the relief valve and blow well down to the atmosphere.

6. Make a determination of amount of gas flow, either by installation of a choke nipple, bucket test or other.

7. Shut well in. Observe for rate of build-up by utilizing sensor data. Do not build-up for more than 24 hours. Vent gas through the vent line and leave open to the atmosphere.

WORKOVER PROCEDURE:

1. MIRU workover rig.

2. Kill well with 10# brine / KCL (dictated by well pressure).

3. Remove tree, install double BOP with blind and 2 3/8" pipe rams, with accumulator closing unit and manual back-ups. Function test BOP system.

4. POOH w/ tubing laying down extra tubing.

5. Rig up wireline service. RIH and set CBP @ ~6679'. Dump bail 4 sx cement on top of plug. POOH and RD wireline service. TIH w/ tubing and seating nipple. Land tubing ±60' above cement. RDMO.

6. Monitor well pressures. If surface casing is dead. MIRU. ND WH and NU BOP. POOH w/ tubing.

7. Depending on conditions at wellsite, continue with either CUT/PATCH Procedure or BACK-OFF Procedure.

CUT/PATCH PROCEDURE:

1. PU internal casing cutters and RIH. Cut casing at +/- 30' from surface.

2. POOH, LD cutters and casing.

3. PU 7 3/8" overshot with 4 ½" right hand standard wicker grapple, 1 - 4 ¾" drill collar with 3 ½" IF threads, pup joint, manual bumper sub, and crossovers. If casing cut is deeper than ±30' utilize >7000 ft-lb torque pipe as needed. Pull a minimum of 10,000# to keep grapple engaged if cement top is high (<~900'). If cement top is low (>~900'), more weight will be required to put casing in neutral. Torque casing string to ±7000 ft-lbs, count number of turns to make-up, and document in the daily report. Ensure that tongs are safely anchored to rig and that all personnel are at a safe working distance from the tongs during torque-up and torque release. After initial make-up, place pipe torque to neutral and mark pipe. Place ±7000 ft-lbs on casing a second time, count turns, then return pipe torque to neutral and count turns. Repeat if torque-up turns do not equal torque release turns. Once torque-in equals torque-out, release overshot, POOH, and lay down.

4. TIH w/ skirted mill and dress off the fish top for approximately ½ hour. TOOH.

5. PU & RIH w/ 4 ½" 10k external casing patch on 4 ½" P-110 casing. Ensure that sliding sleeve assembly shifts ±3' and casing tags no-go portion of patch. NOTE: Shear pins will shear at 3500 to 4500 lbs.

6. Latch fish, PU to 100,000# tension. RU B&C. Cycle pressure test to 7,000# / 9,000# psi.

7. Install slips. Land casing w/ 80,000# tension.

8. Cut-off and dress 4 ½" casing stub.

9. NUWH. PU 3 7/8" bit, POBS and RIH. D/O cement and plug ~6629'. Clean out to PBTD (8537').

10. POOH, land tbg and pump off POBS.

11. NUWH, RDMO. Turn well over to production ops.

BACK-OFF PROCEDURE:

1. PU internal casing cutters and RIH. Cut casing at +/- 6' from surface.

2. POOH, LD cutters and casing.

3. PU 4 ½" overshot. RIH, latch fish. Pick string weight to neutral.

4. MIRU casing crew and wireline services. RIH and shoot string shot at casing collar @ ± 46'.

5. Back-off casing, POOH.

6. PU new casing joint with buttress threads and entry guide and RIH. Tag casing top. Thread into casing and torque up to ±7000 ft-lbs, count number of additional turns to make-up, and document in the daily report. Ensure that tongs are safely anchored to rig and that all personnel are at a safe working distance from the tongs during torque-up and torque release. After initial make-up, place pipe torque to neutral and mark pipe. Place ±7000 ft-lbs on casing a second time, count turns, then return pipe torque to neutral and count turns. Repeat if torque-up turns do not equal torque release turns. Once torque-in equals torque-out go to step 7.

7. PU 100,000# tension string weight. RU B&C. Cycle pressure test to 7,000# / 9,000# psi.

8. Install slips. Land casing w/ 80,000# tension.

9. Cut-off and dress 4 ½" casing stub.

10. NUWH. PU 3 7/8" bit, POBS and RIH. D/O cement and plug ~6629'. Clean out to PBTD (8537').

11. POOH, land tbg and pump off POBS.

12. NUWH, RDMO. Turn well over to production ops.

Logan High Pressure Casing Patches
Assembly Procedure

All parts should be thoroughly greased before being assembled.

1. Install all four Logan Type “L” Packers in the spaces provided in the Casing Patch Bowl. Refer to diagram provided for proper installation.

2. Install Packer Protector from the Basket Grapple end of the Bowl. The beveled end of the Packer Protector goes in first. Carefully push the Packer Protector through the four Type “L” Packers.

3. Align Shear Pin Holes in Packer Protector so that the holes have just passed into the counter bore at the Top Sub end, refer to diagram. The Packer Protector is provided with four Shear Pin Holes. Use only two holes, 180 degrees apart and install the pins.

4. Screw the Basket Grapple in from the lower end of the Bowl, using left-hand rotation. The Tang Slot in the Basket Grapple must land in line with the slot in the Bowl.

5. Insert the Basket Grapple Control into the end of the Bowl. Align Tang on the Basket Grapple Control with the Tang Slot of the Bowl and Basket Grapple. This secures the Bowl and the Basket Grapple together.

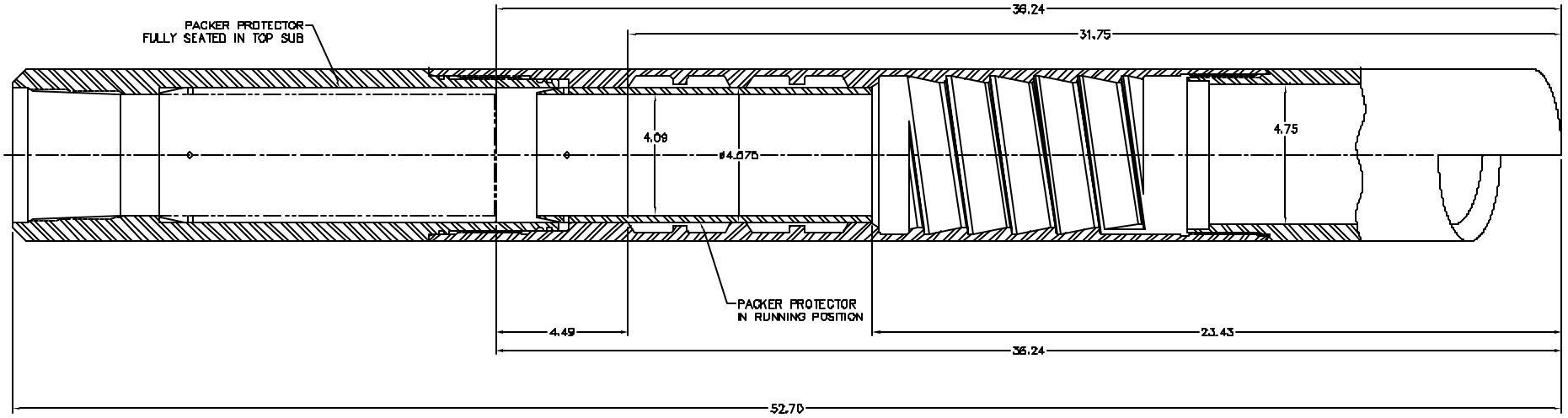
6. Install the Cutlipped Guide into the lower end of the Bowl.

7. Install O-Rings on the two five-foot long Extensions. Screw the first Extension into the top end of the Bowl. Screw the second Extension into the top end of the first Extension.

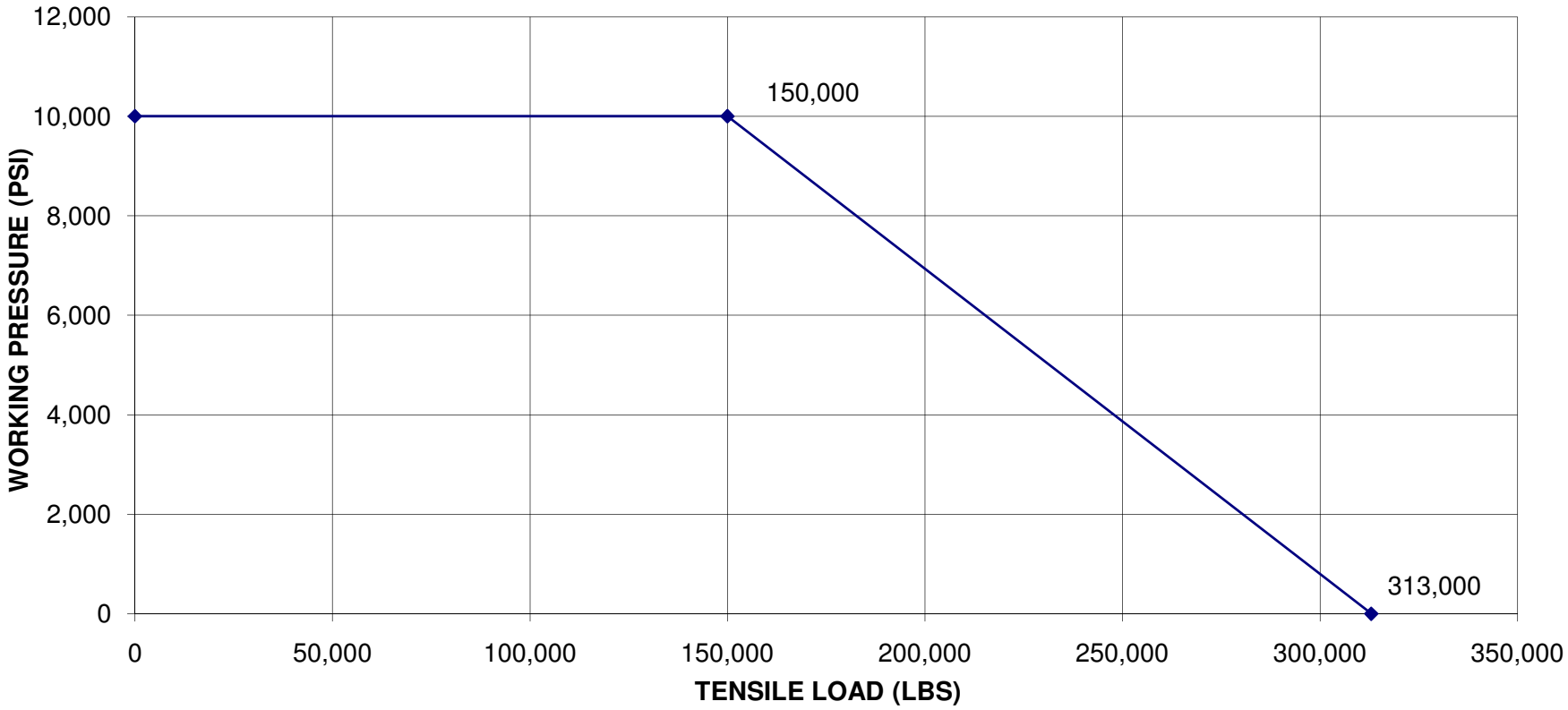
8. Install O-Ring on Top Sub. Screw Top Sub into top end of second Extension.

Follow recommended Make-Up Torque as provided in chart.

510L-005-001 4-1/2" LOGAN HP CASING PATCH



STRENGTH DATA FOR LOGAN 5.88" OD "L" TYPE CSG PATCH
4-1/2 CASING, 10K PSI MAX WP 125K YIELD MAT'L
LOGAN ASSEMBLY NO. 510L-005 -000



COLLAPSE PRESSURE:
11,222 PSI @ 0 TENSILE
8,634 PSI @ 220K TENSILE

Tensile Strength @ Yield:
Tensile Strength w/ 0 Int. Press.= 472,791lbs.
Tensile Strength w/ 10K Int. Press.= 313,748lbs.

DATA BY SLS 11/16/2009

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5.LEASE DESIGNATION AND SERIAL NUMBER: ST UO 01197A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 1022-14A4S

2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER: 43047502270000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779 **PHONE NUMBER:** 720 929-6515 Ext

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1230 FNL 1377 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNE Section: 14 Township: 10.0S Range: 22.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
✓ NOTICE OF INTENT Approximate date work will start: 3/24/2011	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ DRILLING REPORT Report Date:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	✓ OTHER	OTHER: GAS LIFT

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

The operator requests authorization to implement artificial gas lift in the subject well. Please see attached gas lift measurement formula, downhole configuration proposal, and topo map of the project area.

Approved by the Utah Division of Oil, Gas and Mining

Date: 04/04/2011

By: Dark K Quist

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Andy Lytle	720 929-6100	Regulatory Analyst
SIGNATURE N/A		**DATE** 3/18/2011

RECEIVED Mar. 18, 2011

Section 14-10S-22E Gas Lift Proposal

Change of Measurement

The purpose of this change of measurement is to account for additional gas circulated in the wellbore during "gas lift" operations.

"Lift Gas" volumes and BTU content will be measured through a calibrated orifice meter. Reported "Formation Production" will be the BTU difference between the "Sales Meter" and "Lift Gas Meter." The calculation is shown below:

	Sales Meter:	BTU Content	x	Volume
-	Lift Gas Meter:	BTU Content	x	Volume
	Formation Production	BTU Content	x	Volume

Gas meters will be tested twice annually for BTU content.

Downhole Change of Configuration

The purpose of the new configuration is to operate this well with the "gas lift" mode of artificial lift. The installation will include a packer set above the perforation interval and gas lift valves & mandrels spaced throughout the tubing string. "Lift Gas" will be circulated from the casing-tubing annulus, pass through gas lift valves, and be produced with formation production. "Gas lift" is a proven artificial lift method in the Rockies region for high liquid rate wells such as this.

Purpose of Pipeline

The gas lift pipeline will tap into the Archy Bench Compressor's high-pressure discharge pipeline and extend back to the casing valve of each wellhead below. The purpose of this pipeline is to supply the well with "Lift Gas" from the Archy Bench Compressor Station, therefore enabling the "gas lift" mode of artificial lift.

Wells:

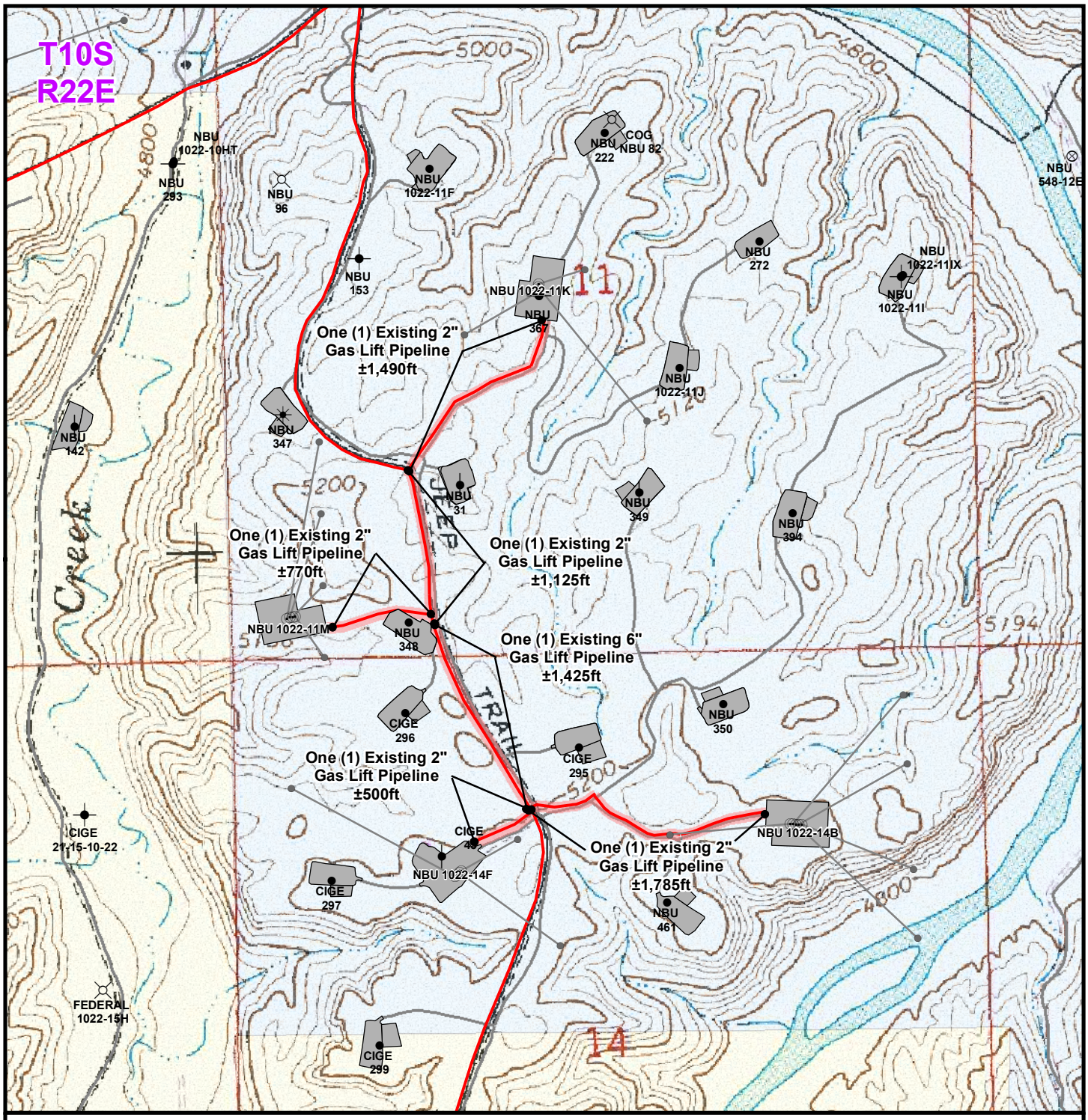
NBU 1022-14B pad:

- NBU 1022-14A1S
- NBU 1022-14A4S
- NBU 1022-14B3S
- NBU 1022-14H1S
- NBU 1022-14H4S

NBU 1022-14F pad:

- NBU 1022-14C4S
- NBU 1022-14D3S
- NBU 1022-14F2S
- NBU 1022-14F4S

RECEIVED Mar. 18, 2011



Legend

- Well - Proposed
- Well - Existing
- Well Pad - Existing
- Gas Pipeline - Proposed
- Gas Pipeline - To Be Upgraded
- Gas Pipeline - Existing
- Gas Lift Pipeline - Sundry
- Road - Proposed
- Road - Existing
- Overhead Powerline - As-Built
- Bureau of Land Management
- Indian Reservation
- State
- Private
- Active
- Approved permit (APD); not yet spudded
- Dry hole marker, buried
- Location Abandoned
- New Permit (Not yet approved or drilled)
- Plugged and Abandoned
- Producing
- Returned APD (Unapproved)
- Shut-In
- Spudded (Drilling commenced: Not yet completed)
- Temporarily-Abandoned

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street, Denver, Colorado 80202

GAS LIFT PIPELINE SUNDRY
SECTION 11, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

609 CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone (307) 674-0609
Fax (307) 674-0182

N

Scale: 1" = 1,000ft	NAD83 USP Central	Exhibit B	
Drawn: CPS	Date: 14 Dec 2010		
Revised:	Date:		

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DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

Name of Company: **KERR-McGEE OIL & GAS ONSHORE, L.P.**

Well Name: **NBU 1022-14A4S**

Api No: **43-047-50227** Lease Type: **STATE**

Section **14** Township **10S** Range **22E** County **UINTAH**

Drilling Contractor **PETE MARTIN DRLG** RIG # **BUCKET**

SPUDDED:

Date **08/17/2009**

Time **3:00 PM**

How **DRY**

Drilling will Commence:

Reported by **KENNY MORRIS**

Telephone # **(435) 828-1691**

Date **08/17/2009** **Signed** **CHD**

FORM 6

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

ENTITY ACTION FORM

Operator: KERR McGEE OIL & GAS ONSHORE LP
Operator Account Number: N 2995
Address: P.O. Box 173779
city DENVER
state CO zip 80217
Phone Number: (720) 929-6100

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304750225	NBU 1022-14H1S		NWNE	14	10S	22E	UINTAH
Action Code	**Current Entity Number**	**New Entity Number**	**Spud Date**			**Entity Assignment Effective Date**	
B	99999	2900	8/17/2009			8/25/09	

Comments: MIRU PETE MARTIN BUCKET RIG. WSMVD
SPUD WELL LOCATION ON 08/17/2009 AT 13:00 HRS. BHL = SENE

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304750227	NBU 1022-14A4S		NWNE	14	10S	22E	UINTAH
Action Code	**Current Entity Number**	**New Entity Number**	**Spud Date**			**Entity Assignment Effective Date**	
B	99999	2900	8/17/2009			8/25/09	

Comments: MIRU PETE MARTIN BUCKET RIG. WSMVD
SPUD WELL LOCATION ON 08/17/2009 AT 15:00 HRS. BHL = NENE

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	**Current Entity Number**	**New Entity Number**	**Spud Date**			**Entity Assignment Effective Date**	

Comments:

ACTION CODES:
- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (Explain in 'comments' section)

ANDY LYTLE
Name (Please Print)
Signature
REGULATORY ANALYST
Title
8/18/2009
Date

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AUG 18 2009
DIV OF OIL, GAS & MINING

(5/2000)